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A DELPHI STUDY TO DETERMINE PROFICIENCIES FOR
CONTINUING EDUCATION AND COMMUNITY SERVICE ADMINISTRATORS
IN MASSACHUSETTS REGIONAL COMMUNITY COLLEGES

A Dissertation Presented

By

STEVE MARADIAN

Submitted to the Graduate School of the
University of Massachusetts in partial fulfillment
of the requirements for the degree of

DOCTOR OF EDUCATION

September 1982

Education



Steve Maradian
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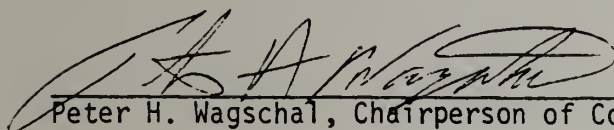
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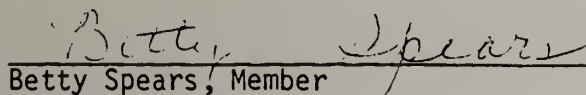
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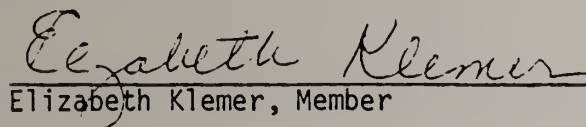
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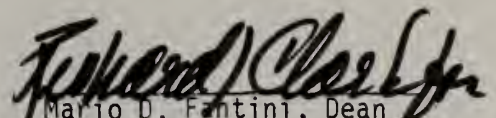
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ABSTRACT

A Delphi Study to Determine Proficiencies for Continuing Education and Community Service Administrators in Massachusetts Regional Community Colleges

(September 1982)

Steve Maradian, B.S.; M.Ed., Northeastern University
Ed.D., University of Massachusetts

Directed by: Professor Peter H. Wagschal

The purposes of this study were to identify proficiencies for continuing education and community services deans and assistant deans in Massachusetts community colleges and to achieve consensus on the need for those proficiencies for the 1980s and 1990s. Two study groups were employed in the study. One group comprised former presidents of the National Council on Community Services and Continuing Education nationally recognized leaders in adult education, continuing education and community services, and community college education. The other group consisted of the deans and assistant deans of continuing education and community services in this system. The Delphi technique was chosen as the methodology.

Procedures. The data were gathered through a series of three questionnaires. These were designed to (a) generate the list of proficiencies, and (b) rate the need for the proficiencies. The first questionnaire requested participants to list proficiencies they believed essential for this period. Questionnaire two asked respondents to rate 65 items in seven major proficiency areas. The third questionnaire asked

respondents to reassess original answers and state reasons if they remained outside of the interquartile range.

Findings. Fifty-seven proficiency statements in seven categories were identified as essential to administer effectively continuing education and community service divisions during the 1980s and 1990s. The seven areas addressed were: finance; planning; research and evaluation; organizational interaction; staff development; community role; and personal characteristics. The application of Delphi to achieve consensus was confirmed. A high degree of consensus was achieved in Round Two. Delphi is especially useful in identifying proficiencies when a separate group is used as it has no vested interest in the positions under study. Delphi questionnaires seeking to identify future related concerns, when using two groups, proved applicable to this study.

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CHAPTER I

INTRODUCTION

Since 1945, growth in the community college movement has been dramatic. Between 1960 and 1970, the number of two-year colleges in America had increased even more dramatically, growing from 678 to 1070. During this period, enrollments quadrupled. Community college enrollments continued to expand with increases in the numbers of part-time students, women, minorities, handicapped, adults, and special needs students (Boyer, 1972). The American Association of Community and Junior Colleges reports that there are 1229 two-year colleges in the United States and its territories. Of these, 1048 are public institutions (cited in Educational Resource Information Center, 1981). During the past decade, the growth of continuing education programs in higher education has received much attention. Educators from all levels are encouraging lifelong learning. In addition, industrial, business, and public sector employers are encouraging employees to upgrade and continue their education to keep pace with changing job responsibilities. Continuing education divisions within higher education institutions have assumed a major role in meeting this need.

During this period, community college administrators managed growth with virtually unlimited resources and students. By contrast, administrators must now concern themselves with managing programs with fluctuating enrollments and reduced resources from federal, state, and local sources. This will continue throughout the next two decades

(Alfred, 1978). Additional problems confronting community college administrators throughout the next two decades include: an uncertain economy; increased federal regulations; rising competition among four-year colleges and other institutions offering similar educational programs; ambiguity of the impact of energy resources; and societal demands for accountability (Scigliano, 1979). Thus a new set of problems will dominate management efforts if institutional survival and stability are to be insured during this period (Carnegie Council, 1980; Cosand, 1979). These problems will require different administrative responses and new management proficiencies.

Recently, the role of continuing education has emerged from a second-class institutional position to one that is central to lifelong learning and to providing educational opportunities for those who are not degree-seeking, full-time students (Shandler, 1980). In community colleges nationwide, 62 percent of the credit students are part-time; an additional four-million are enrolled in non-credit courses (cited in Educational Resource Information Center, 1981). Continuing education and community service within the community college has become central to the colleges' mission. It, too, is no longer viewed as supplemental to other college-sponsored programs. This new role has evolved from the increased demands placed upon individuals within an increasingly complex society (Kavanaugh, 1979), and the understanding on behalf of those adults that participation in formal, as well as informal, educational activities is in their own best interest (Knox, 1979). It is expected that continuing education and community service activities will dominate

higher education throughout the next two decades, especially at the community college level. Administrators of these divisions are well aware of these new demands (Carnegie Council, 1980; Shandler, 1980) and must prepare themselves for the resultant changes.

Assumptions

In its attempt to respond to societal changes and demands, higher education will undergo several changes throughout the 1980s and 1990s. Continuing education and community service in Massachusetts community colleges facing these changes on a more localized level will also make adjustments. Based on these societal changes, the following assumptions reflect what continuing education and community service will be confronted with throughout the next two decades in Massachusetts community colleges:

1. The forfeiting of credit courses applicable towards degrees;
2. The financing of courses by the consumer and accountability will dominate;
3. The increasingly important role of adult learning theory in the administration of programs;
4. The increase of competition among institutions;
5. The utilization of technologies applicable to education and its administration will be necessary; and,
6. The enrollments will fluctuate and demands by various special groups requiring specialized training will increase.

Statement of Purpose

The purpose of this study is to identify the administrative proficiencies required by deans and assistant deans of continuing education and community services in Massachusetts community colleges to effectively manage these divisions during the 1980s and 1990s; and to gain consensus of these proficiencies among a representative group of continuing education community services authorities in the 15 Massachusetts community colleges. One related purpose of this study is to inform administrators of those proficiencies which have been identified and agreement reached as essential for improving administrative effectiveness for community college continuing education community service management in Massachusetts. Another purpose is to observe if data obtained from a select group, utilizing the Delphi Technique, differ from data obtained from a representative group of authorities. A final purpose is to identify areas, related to this topic, which warrant further inquiry.

Rationale

Problem statement. While the emerging problems of administering a comprehensive continuing education community services division throughout the 1980s and 1990s in Massachusetts community colleges are complex, there are reasonable steps which can be undertaken to effectively respond to them. Higher education institutions are witnessing accelerated changes throughout society and there is evidence to suggest that the rapid pace of change will continue. These changes are impacting on the management of postsecondary institutions and all levels of the

institutions' management will be effected. These individuals must be equipped with proficiencies that will insure the survival and viability of these institutions. Due to steady growth in continuing education and community services programs in Massachusetts community colleges (Massachusetts Postsecondary Education Commission, 1979) and its responsibility to react quickly to educational needs, the administrators of these divisions must recognize and possess those proficiencies applicable to effective management for their divisions.

Currently, the administration of these units is dominated by the legislated separation between day and evening programs which stipulates that evening and summer classes operate at "no expense to the Commonwealth" (Chapter 15, Section 39, Massachusetts General Laws). Regardless of this issue, these colleges, and each division within these colleges, will be faced with the external pressures of fluctuating enrollments; increased federal and state regulations; consumer demands by students; increased accountability; economic uncertainty; and the concern for the effects of the rising costs of energy for transportation and other uses. These concerns remain primarily outside of the institution and will require new and continuous updating of administrative skills to manage adequately institutional activities.

Institution-based problems confront the manager as well, and will influence the divisions during this period. These include: allocating resources more effectively; planning as an ongoing process; insuring quality programming and accountability of the programs; reacting to the competition for students among colleges and other institutions; issues

of collaborating and cooperating among institutions; the refining of the internal decision-making process; awareness of demographic, as well as technological, changes; and the impact of political and community-based decisions upon the institutions (Cosand, 1979).

The decline in public confidence in higher education and the continuous debate as to what is considered legitimate community college continuing education and/or community service activities make it imperative that management does not operate with a "business as usual" attitude. The conditions which confront Massachusetts community colleges' management have created a need for these administrators to acquire new or updated skills to respond to problems both external and internal to the institutions' community. The proximity that continuing education and community service activities have to these conditions necessitates a new set of proficiencies and approaches to management (Knox, 1979).

There is considerable agreement among educators that management issues and problems confronting the institutions throughout the next twenty years will be different from those of the past twenty years. Thus, the identification of new proficiencies by those responsible for implementing responses to the issues and problems should lead to improved management of continuing education and community service divisions. Thus the community college system will be permitted to serve better and more economically the communities in which they are located.

Agreement on a set of proficiencies for continuing education and community service administrators may reduce concerns and frustrations among administrators who sometimes feel that events and conditions about

the future are beyond their control. An understanding of the proficiencies should result in an increase in staff development activities among the administrators who are responsible for continuing education and community service programs.

The financial design of continuing education and community service divisions reduces the impact of several of the issues confronting educational administrators in Massachusetts community colleges. Similarly, the design increases the potential impact of several of the issues. The one change that presents itself as the greatest problem and opportunity is demographics: the population will become older; the racial and ethnic composition will change significantly; population migration to the sunbelt states will increase, especially from northern states; the needs of the labor force and the competition for the younger adult will increase; and the impact of competition from the armed services on this age group (Schmid and Russell, 1980) will require new approaches. The continuing education and community service divisions are optimally positioned to address these challenges as new opportunities (Shandler, 1980). Their success will be dependent upon identifying those proficiencies which best prepare administrators for these opportunities (Knox, 1979; Shandler, 1980).

Design of the Study

The design of the study was based on the Delphi Theory and Technique, a process of gaining opinions among a group of experts on a selected activity or topic without face-to-face encounters. Delphi

seeks to gain consensus through the administration of a series of paper-and-pencil questionnaires and is useful in those areas of inquiry where exact knowledge is not readily available (Dalkey, 1969).

The Delphi technique used was considered both "exploratory" and "conventional." The characteristics of exploratory Delphi are: (1) judgements are shaped through controlled feedback, and (2) the forecasting which is requested is based on predetermined time periods (Weaver, 1972). The characteristic of conventional Delphi is that it utilizes one group, or the panel of experts, to develop questionnaire items and a second group, the study group, to respond to the questionnaire until consensus is achieved (Linstone and Turoff, 1975, p. 5).

Three questionnaires were administered in this study. The first questionnaire was mailed to the panel of experts who were requested to identify and list proficiencies each believed would be essential to continuing education and community service administrators during the 1980s and 1990s. Items generated from this questionnaire, or Round One of the Delphi process, were used to develop Delphi Questionnaire #2.

The second and third Delphi questionnaire was administered to the study group. This group was comprised of deans, assistant deans and one assistant to the dean of continuing education and community service divisions in Massachusetts community colleges. The questionnaires were a series of proficiency items subgrouped into seven major categories. Statistical feedback in the form of interquartile ranges (the middle fifty percent of responses) and median data was provided between the second and third rounds.

The purpose of each of the three questionnaires was the following:

1. The initial questionnaire was used for the identification of administrative proficiencies. The data of all respondents were compiled and presented as Delphi Questionnaire #2 to the study group.
2. The second questionnaire was presented to the study group for responses to each item and comments requested if appropriate. Respondents were asked to rate each item using a rating-scale ranging from strong agreement to strong disagreement with a neutral response. The data of all respondents were compiled and presented in Round Three.
3. The third questionnaire presented respondent and group data and the final opportunity to reevaluate each response. Final analysis was based on the data obtained from the third questionnaire.

Definition of Terms

The terms applicable to this study and their definitions are as follows:

Community Services: Community services are "educational, cultural, and recreational services which an educational institution may provide for its community in addition to its regularly scheduled day and evening classes" (Harlacher, 1969, p. 12).

Continuing Education: Continuing education is "those non-credit short courses offered by the community services division . . . college credit courses offered in the evening for adults, both credit and non-credit offerings for adults, curricular-based non-credit courses for adults, special courses day and evening for students enrolled in less than college-level work, and courses offered at the community college for currently enrolled high school students" (Harlacher, 1969, p. 13).

Lifelong Learning: Lifelong learning is education that "takes place not just in educational institutions, but through avenues ranging from independent study to the efforts of business, industry, and labor" (Furlong and Others, 1977, p. 3).

Proficiencies: Proficiencies are defined as "high levels of skills and competence with the capability to utilize these skills and competencies in a specific situation or work demands" (Knox, 1979, p. 4). The term "proficiency" can be interchanged with the term "competency" and was chosen because it appeared more frequently in literature addressing continuing education management.

Panel of Experts: Eleven former presidents of the National Council for Community Services and Continuing

Education, one community college president, four professors of higher education specializing in adult and continuing education, and two community college community services specialists.

Respondents: The fifteen deans, thirteen assistant deans and one assistant to the dean of continuing education and community services in Massachusetts community colleges.

Consensus: An expression of general agreement among the respondents represented by convergent responses.

Limitations

The purpose of this study is to identify and gain consensus on administrative proficiencies. Given this focus, there are several limitations of the study. These limitations include:

1. The results are limited to the Massachusetts community colleges, reflecting that system's structure;
2. The results are confined to continuing education and community services administrative proficiencies within Massachusetts community colleges;
3. Due to the need for adaptability and flexibility of continuing education and community service programs, the results may be short-term;

4. The respondent population did not include presidents, faculty, or other administrators. The focus was limited to those who have decision-making authority in continuing education and community services;
5. The results are limited to the respondents' perceptions of the future of administrative proficiencies at the time the questionnaires were completed; and,
6. The analysis did not separate deans' responses from assistant deans' based on the assumption that the proficiencies are equally applicable to both groups.

Summary

This study sought, therefore, to gain consensus among continuing education and community service administrators in Massachusetts community colleges regarding administrative proficiencies required to manage effectively these divisions during the 1980s and 1990s. This was accomplished using the Delphi Technique, a series of questionnaires with controlled feedback, distributed to each of the deans and assistant deans within these divisions. Identification of the proficiencies is designed to result in increased development opportunities for the managers, more effective administration of the divisions, and improved educational opportunities for the communities served by the colleges.

CHAPTER II

REVIEW OF THE LITERATURE

The major purpose of this chapter is to review the literature pertinent to this study. The literature review falls into five areas: the history and philosophy of community colleges; continuing education and community services in community colleges; Massachusetts community colleges and continuing education and community service programs; the future of higher education; and the Delphi Theory and Technique.

History and Philosophy of Community Colleges

The development of the community college as part of higher education is a uniquely American phenomenon (Wattenbarger, 1977). It is "an American social institution growing out of the nation's unique social, political, economic and cultural society and its needs. The original idea of the community college was one that involved a grass roots approach" (Harlacher, 1969, p. 7) and evolved from the junior college, whose purpose was to provide the first two years of university level education preparing students for specialization at the upper division level within the university (Monroe, 1972, pp. 1-13).

The junior college concept began at the University of Chicago in 1892 when President William Rainey Harper created two major divisions within the university: the academic college and the university college. "In 1896, the academic college was renamed the junior college" (Monroe, 1972, p. 9). Prior to this, universities had been influential in

encouraging high schools to offer postgraduate programs, or the thirteenth year, to prepare students for university work. Although Harper was instrumental in the junior college movement, two California educators, Alexis F. Lange (Dean of the School of Education at the University of California, 1906-1924) and David Stacy Jordan (President of Leland Stanford Junior University), "were most responsible for the early development of the junior college movement" (Monroe, 1972, p. 10). Both believed that high schools should assume the responsibility of educating students at the thirteen and fourteenth levels thus relieving the university of this function.

The community college/junior college movement has three milestone eras (Thornton, 1960, p. 45) which best describe it. From the period 1850-1920, the junior college was accepted as providing the first two years of university work and was limited to transfer activities. Thornton (1960) describes this era as "education for transfer" (pp. 46-53). The second era, the period 1920-1945, saw the junior college expand its activities and offer terminal and semi-professional education. This addition of terminal or occupational programs provided a new dimension, but it was not until the third era, 1945-present, that the community/junior college evolved into a comprehensive educational institution, expanding its services to include service to the community. This expansion was partly a result of the successes the colleges had responding to the training needs brought on by World War II, and this expansion "completed the development of the community junior college" (Thornton, 1960, p. 54). It is this period when community service and continuing education activities came into focus.

It is not entirely clear when the term "community college" first appeared. With the expansion of the junior college role and the emerging needs of adults after World War II, the junior college transformed into the community college. Gleazer (1968) best summarizes the differences between the two terms, "community college" and "junior college":

Junior college, the older term, describes an institution which offers the first two years of college. Preparation of students who transfer to the four-year college or university is usually one of its major functions (pp. 27-28).

For the most part, the community college has become a comprehensive institution with a great variety of programs to match the cross-section of the community represented in its students. . . . The comprehensive community college exists to give students opportunity beyond high school to find suitable lines of educational development in a social environment of a wide range of interests, capacities, aptitudes and type of intelligence (p. 28).

The community college philosophy clearly demonstrates that it is a multi-purpose institution (Harlacher, 1969, pp. 3-4). The concept is fully developed and the need for establishing comprehensive community colleges throughout the country has been documented (Thornton, 1960, p. 54). Comprehensive community colleges are committed to five major purposes:

1. Preparation for advanced study (the transfer function);
2. Occupational education (the terminal function);
3. General education;
4. Guidance and counseling; and,
5. Community services (Harlacher, 1969, p. 3).

Community colleges have emerged as institutions which provide the most opportunities for the largest number of citizens. Palinchak (1973) believes the community college is the "greatest American educational invention of the twentieth century" (p. 221), and increasingly public leaders identify it as the best agency capable of responding to community needs (Monroe, 1972; Harlacher, 1969). The student body is the entire population of the community served and the college, uniquely broadens access to higher education by responding to community needs. The community college is thus characterized as

. . . neither a school, nor a university. It has developed as a result of the apparent inability of the high school and the university to adapt rapidly enough to changing needs, thus acquiring an identity of its own and a unique role to play in education (Harlacher, 1969, p. 7).

The Continuing Education and Community Service Function in Community Colleges

Continuing education and community service in community colleges is generally a misunderstood function. Often operating as a separate unit, there remains little agreement on the roles of either continuing education or community services. This problem was identified when Myran (1969), in a national study, found that 77.6 percent of the respondents preferred the term "community services," while 13.5 percent preferred "continuing education" (pp. 4-5).

The idea of community services dates back to Socrates who took his wisdom into the streets and created small student communities. The ideas were furthered by Plato, who, in his Republic, desired that all

citizens receive a proper education. Aristotle carried the concept further "teaching Athenian youth in the shaded walks of the lyceum" (Harlacher, 1969, pp. 4-5). The community service idea took hold in America in 1826 by Josiah Holbrook in Derby, Connecticut, when he developed the American Lyceum. Its purpose was to provide citizen participation in community development. Shortly thereafter, some 3,000 units were established providing opportunities for citizens throughout the country (Harlacher, 1969, p. 6).

The community school (Chautauqua) concept became the natural outgrowth to the Lyceum. The emphasis was on service to the whole community, not limiting itself to school-age children, and the use of community resources as significant to the learning process. In addition to the community school concept, university extension programs focusing on community development and improvement were initiated. This movement resulted from the passage of the Morrill Act in 1862. Together, these early concepts contributed to the community service function in community colleges (Harlacher, 1969, p. 7).

While the community service function is theoretically different from the continuing education function, in many community colleges they have become entangled administratively. Harlacher (1969) believes that the two are separate functions but "have become entangled" (p. 12) due to the organizational structure. Myran (1969) believes the opposite, that the two terms can be used interchangeably and that the two functions "are not mutually exclusive" (p. 16). Giving further credence to the overlap, Myran argues

. . . the terms continuing education and community services are often used in juxtaposition. Community services and continuing education are not mutually exclusive. One includes elements of the other; it is, therefore, folly to attempt to minutely delineate these terms (p. 16).

Myran further explains that there remains one significant difference between the terms. Community services can be provided for all age groups, addressing the widest variety of educational, cultural and recreational needs. Continuing education is primarily intended for adults and its purpose is more closely tied to purely educational activities.

Harlacher (1969), Raines (1969; 1972), and Myran (1969), in several major studies, have documented community services and continuing education contributions toward the comprehensive or the "third era" of community college evolution which had been noted by Thornton (1960). In his nationwide survey, Harlacher (1969), identified a taxonomy of community services activities which should be included in community service programs. These include:

1. To become a center of community life by encouraging the use of college facilities and services by community groups when such use does not interfere with the college's regular schedule;
2. To provide for all age groups educational services that utilize the special skills and knowledge of the college staff and other experts and are designed to meet the needs of community groups and the college district at large;
3. To provide the community, including business and industry, with the leadership and coordination capabilities of the college, assist the community in long-range planning, and join with individuals and groups in attacking unresolved problems;

4. To contribute to and promote the cultural, intellectual, and social life of the college district community and the development of skills for the profitable use of leisure time (p. 19).

Raines and Myran (1972) believed that community colleges were moving away from the traditional preoccupation of educating college-age students and were becoming more fully committed to the concepts of life-long learning and resource development, and that community services personnel were providing the leadership (pp. 2-16). Gollattscheck, et al. (1976) saw the community services function expanding to include community renewal with more emphasis being placed on identified community needs. This concept of a community renewal college would reach all areas of the college's service area; provide those educational services needed by all segments of the community; renew community pride; and provide a vehicle for community development and emphasize community services as the basis for educational services and programs.

The continuing education/community service function, once viewed as peripheral to other college activities, is rapidly moving toward an equal role with responsibility for providing educational services meeting community needs. Initially seen as providing continuing education opportunities for adults during evenings, these divisions have emerged to become whatever any given community college, through its president and division personnel, wish it to become. It is precisely these new responsibilities and the new demands confronting the college which necessitates this study.

Massachusetts Community Colleges and Continuing
Education Community Service Programs

The system of Massachusetts statewide regional community colleges was established by the Massachusetts General Court in Chapter 605, Acts of 1958. In accordance with this legislation, the Massachusetts Board of Regional Community Colleges was created to determine the need, organize the development and execution of an overall plan to meet this need, and to establish and maintain regional community colleges at suitable locations throughout the Commonwealth. Fifteen community colleges were established; the first community college to open was Berkshire, located in Pittsfield, in 1960. The last community college opened was Roxbury, located in Boston, in 1975.

The initial emphasis for development in the system was the transfer and college parallel programs. Occupational degree and certificate programs were gradually added in health, secretarial, business and the technology areas.

Within each of the colleges the organizational structure provides for the continuing education and community service function. These divisions were authorized by Chapter 15, of the General Laws, Section 39.

This law states:

Each regional community college may conduct summer sessions, provided such sessions are operated at no expense to the Commonwealth. Each regional community college may conduct evening classes, provided such classes are operated at no expense to the Commonwealth.

These divisions generally offer programs which range from credit courses; non-credit courses; courses which award continuing education units (CEU's)

and special seminars and workshops for specialized populations. The majority of the offerings, or the single largest activity, is the offering of credit courses, those which have been developed as regularly-offered day division courses.

Non-credit courses comprise the second largest offering within the divisions. Not all community colleges in Massachusetts offer a wide variety or selection of courses in this area. Special seminars, workshops, and specialized courses comprise the remaining offerings. Programs in this area are relatively new, responding to the needs of business, industry and community organizations (Cotoia, 1976).

Unique to Massachusetts community colleges is the separation of the administrative and financial designs, and enabling legislation for the "day" and "evening" programs. Evening and summer programs are designated continuing education and community services throughout the system. Under the present policy, day divisions of the college receive maintenance and operating funds through state-appropriated budgets. The divisions of continuing education and community services are administered and funded by tuition and grant-generated sources and are completely self-sustaining. Evening students enrolled in credit courses are not considered part of the colleges' full-time equivalent students for funding purposes. The administrative and classified staffs of these divisions are not funded with state revenues. While funding patterns vary from state to state for non-credit "community service programs" (Rinnander, 1976; Yarrington, 1976), Massachusetts remains unique in separating day from evening students and determines its funding upon

time of day versus program(s) of study (Cotoia, 1976). This design often results in colleges operating within the parent college, allowing each college to determine its own areas of development. One consequence is that the divisions are unequal to state-supported programs because they receive no state support for any activity. They must rely primarily on tuition-generated income to sustain their programs and services.

Each division throughout the system attempts to provide services in relation to the needs of the communities served and within the budgetary limitations imposed by the funding pattern. Two recent studies on continuing education and community services in Massachusetts community colleges highlight problem areas. Cotoia (1976) studied the programs in accordance with Harlacher's taxonomy and identified areas for further development needed to elevate the programs to acceptable standards. Murphy (1976) in his study identified personnel, financing and organizational structures (p. 81) as current and anticipated problems. Since these studies, the Massachusetts public higher education community has undergone major organizational changes, some which directly affect the community college.

Through the legislative process, the Massachusetts Board of Regional Community Colleges, which formally had administrative authority over each community college, was abolished on 28 February 1980. In its place, the legislature, in approving Chapter 329, the Acts of 1980, established the Board of Regents and reorganized public higher education. On 1 March 1981, state-level administrative authority for higher

education was assigned to this board. Concurrent with this, each of the fifteen community colleges has a local governing board comprised of nine individuals: seven who are appointed by the governor, one alumni, and one individual appointed by the president. Recent legislation has added a tenth member who must be a student at the institution. Since the Board of Regents' authority took effect, three community colleges have been affected. Roxbury and Bunker Hill Community Colleges, both located in Boston, are being merged with Boston State College and the University of Massachusetts at Boston. Regardless of the merger, the community colleges will retain their presidents. Massachusetts Bay Community College, in Wellesley, and Framingham State College's budgets will be combined, while each institution retains its president and institutional organization (Traicoff, 1981).

Since 1960, Massachusetts community colleges have witnessed continuous growth (Dober and Associates, 1975, p. 7). Growth in the number of students served and programs offered by community colleges is anticipated (Cotoia, 1976; The Massachusetts Postsecondary Education Commission, 1979) throughout the 1980s and 1990s. Continuing education will be the fastest growing unit of higher education (Massachusetts Postsecondary Education Commission, 1979, p. 5) during this period. The availability of newly designed continuing education community services opportunities and management of these opportunities will be an important factor in responding to this growth.

The Future of Postsecondary Education

The future of postsecondary education, impacts of change, and potential remedies has recently received much attention. This attention has been focused at both community college and university level institutions. The literature addresses several areas. Those areas reviewed in this section include: general trends for the 1980s and 1990s; management issues and impacts for this period; and community college related issues for this period.

Postsecondary education in the United States is faced with an uncertain future. "Survival" (Mayhew, 1979; Gleazer, 1981; Argyris and Cyert, 1980) and "Doom and Gloom" (Carnegie Commission, 1979; Gleazer, 1980) have become key words in literature concerning the future of postsecondary education. Regardless of diction, problems do and will continue to confront higher education: "but . . . there are reasonable solutions to most" (Carnegie Council, 1979).

Among identified problems or issues confronting postsecondary education, enrollment has received considerable attention (Carnegie Council, 1979; Argyris and Cyert, 1980; Mayhew, 1979; Schmid and Russell, 1980; Harrington, 1979; Cosand, 1979; Scigliano, 1980; Gleazer, 1981). Agreement as to the exact nature of the problem is difficult to arrive at. The Carnegie Council (1979) anticipates fluctuations in enrollment patterns persisting for the foreseeable future and "only one great new force in the forthcoming two decades can now be identified: the demographic depression for higher education" (p. 85). The decline in

traditional enrollments (18-22 year olds) rests with the "absolute decline in the number of individuals in this age group. The young people who will be entering college from 1980-1997 are already born. The 18-year-old population, which peaked in 1979, will decline 26 percent by 1992 (p. 153). Geographic location, public versus private and program appeal are equally important factors in maintaining enrollments. Mayhew (1979) believes the small private liberal arts college faces the greatest problem in maintaining enrollments (pp. 191-192) and that state supported institutions fare better as "states having a vested interest in their institutions simply do not allow them to die" (p. 2). Institutions located in areas of population growth also have less concern with enrollments (Mayhew, 1979, p. 2; Schmid and Russell, p. 3). Other factors affecting the maintenance of adequate enrollments include: impacts of the labor force (Schmid and Russell, p. 4; Carnegie Council, pp. 193-195); the quality of the educational programs (Mayhew, 1979, pp. 212-218; Harrington, 1977, pp. 211-216; Scigliano, 1981; Eaton, 1979); financial limitations (Scigliano, 1981; Cosand, 1979, p. 1; Carnegie Council, 1979, pp. 139-151; Mayhew, 1979, pp. 266-289); and impacts from the demands of the armed services (Carnegie Council, 1979, p. 42).

The decline in the traditional student group (18-22 year olds) will partially be offset by the anticipated growth of adult enrollments. Many will attend part-time and/or seek courses related to occupational demands (Carnegie Council, 1979, pp. 167-168). Harrington (1977) reports that "the major change in college and university enrollment

patterns . . . has been the increase in older students. Part-time credit, mainly an adult phenomenon, has increased more rapidly than full-time registration at many institutions. . . . Adults now outnumber younger students and are the new majority in higher education" (p. 1). The current trend along with a 48 percentage increase in the age of adults 30-44 (Schmid and Russell, 1980, p. 1) of the total population suggests that this growth will continue.

Financial limitations pose another problem for postsecondary institutions during this period. Mayhew (1979) views financing as equally crucial as the maintenance of enrollments for institutional survival and "through planning, institutions can better understand the future . . . and financing necessary for their survival" (p. 29). Competition for available funds and fluctuating economic conditions will necessitate strategic planning (Scigliano, 1981) for institutional stability. In its study, the Carnegie Council's (1980) examination of income sources suggests that non-tuition support for higher education will not increase during this period, and there will be "more and more dependence on public sources of financial support" (p. 31). Conversely, Schmid and Russell (1980) believe that "continuing tight government budgets and the tax revolt will slow public funding" (p. 7). The competition for funds, whether it be from public or private sources, will be strong among all segments of postsecondary education, the primary emphasis being survival (Cosand, 1979, p. 2).

Stabilized enrollments and financial security are the principal concerns for the 1980s and 1990s. The problems, though, are not limited

to these areas. Retention of students and curricula improvement will dominate college activities throughout the period. Mayhew (1979) suggests that institutions must make "an educational program reasonably effective and more attractive to students" (pp. 221-222). The Carnegie Council (1980) warns that institutions must become more market sensitive and responsive to student needs: "the road to survival now leads through the marketplace . . . adjusting to the market" (p. 30). The need for upgrading and updating of curricula is particularly important in responding to market demands in education.

The 1980s . . . should be a boom period for new technologies; new computer applications; wide utilization of micro-processors; a transformation of office word processing and communications; and exploration of whole new fields, like biotechnology. The expansion of high technology will have the effect of upgrading many occupations, making higher skill demands in formerly routine jobs, and creating entirely new skilled positions. Increased industry training needs imply changes in curriculum and program structure (Schmid and Russell, 1980, p. 6).

Administrative issues. "The call for leadership is a call" (Carnegie Council, 1980, p. 107) to managers of postsecondary institutions to respond to problems confronting each institution and develop new approaches to problem-solving and decision-making. Mayhew (1979) states that "the establishment of an administrative structure that preserves for central administration the needed prerogatives of implementing effective policies" is a must for any postsecondary institution. In addition, Mayhew continues, "it is the assumption of administrative leadership" (p. 27).

During periods of change, the administration will be called upon to provide dynamic leadership, provide direction and establish an atmosphere conducive to change. Administrative skills commensurate with these demands are a prerequisite for institutional survival. Mayhew (1979) unfortunately sees academic administrators as ill-prepared for many of the emerging problems of the 1980s.

Another problem is the lack of administrative specialists and staff people with the background and training needed by educational institutions. Modern colleges and universities are complex organizations that require people who understand financial matters and who know how to accumulate and use large amounts of statistical data, generate funds, plan buildings, deal with state and federal government, plan land use, manage investments, and deal with faculty and students. Yet the route to administration is typically through the academic ranks and on-the-job preparation after appointment to this or that administrative post. Although there are academic programs designed to prepare academic administrators, they typically prepare generalists instead of the needed specialists and turn out people who are chiefly acceptable in limited numbers and types of institutions. Thus, it is all too possible for highly specialized positions to be filled by individuals who really do not understand the needed technology or who do not understand the application of a known technology to an educational institution. Twenty years as comptroller for Boeing may ill equip a person to become comptroller of a liberal arts college, as may twenty years of teaching home economics ill equip a person to be a director of institutional research (Mayhew, 1979, p. 36).

Walker, in his book The Effective Administrator (1979), and Cosand, writing in the New Directions series (1979), both identify administrative skills for the 1980s. Among those identified by Walker are the ability: "to elicit trust" (p. 47); "to bargain" (p. 41); "to take criticism" (p. 47); "to communicate, be open and provide information" (p. 52); and "to respect the people with whom you work" (p. 193).

Cosand, referring to the community college administrator, echoes Walker and believes that "the leadership must be skilled, sensitive, perceptive, futurist oriented, aggressive, committed to the community college philosophy, hard working, able to communicate internally, able to make the difficult decisions, and have the respect of both those above and below the institutional hierarchy" (p. 19).

Knox (1979) and Shandler (1980) examined administrative skills applicable to continuing education administrators. Knox categorized the administrative skills into three core areas of proficiency. "These are: An understanding of the field of continuing education; an understanding of adults as learners; and personal qualities such as positive attitudes towards lifelong learning, effective interpersonal relations, and innovativeness" (p. 68). Knox also believes the administrator, to be truly effective, must understand the organization which sponsors the continuing education program (p. 19), understand societal trends (p. 11), have an awareness of staff and financial resources (p. 12), and have good interpersonal relationships (p. 18). Shandler stresses the importance of commitment to adult learning theory, knowledge of continuing education, exceptional communications skills and the ability to work cooperatively with all segments of the institution (p. 10).

Argyris and Cyert (1980) and the Carnegie Council (1980) both fear administrative burnout due to the relentless pressure of daily problems. The Carnegie Council's report believes in one scenario in which "both the number and quality of persons willing to serve as administrators

decline as the positions become more difficult and subject to more harassment" (p. 3). Additionally, the report concludes:

It is difficult for new administrative talent to arise and be recognized. There are few successes along the line to lead to greater visibility and greater opportunities; there are no successes without costs; and the now existing communications network, and the veto groups who use it, can turn the costs into guillotines. Aggressive leaders are often eliminated in the process (p. 108).

Consequently, many administrators, faced with daily pressures, find themselves in a "no-win" situation and "the fact is that for many it is not very much fun anymore" (Argyris and Cyert, 1980, p. viii). Nevertheless, to survive and provide effective leadership requires a multitude of skills for a variety of situations. "Quick fixes will not work; salvation is achieved, partly by grace, but mostly by hard work of pondering fundamental questions and positioning anew the essential values of the academy" (Argyris and Cyert, 1980, p. ix).

Community colleges in the 1980s and 1990s. Community colleges, which have enjoyed growth and prosperity since the 1960s, now face the same uncertain future as do four-year colleges and universities. Problems confronting community college administrators for the 1980s and 1990s include: fluctuating economic conditions; increased federal regulations; rising competition among colleges and other institutions offering similar programs; and societal demands for accountability (Scigliano, 1979). In addition to these, issues of educational quality, reduced resources, multi-agency cooperation, literacy development, and the application of new technologies will, by necessity, become a part of the comprehensive community's activities (Watson, 1980).

"The future holds glorious opportunities" (Watson, 1980, p. 3) for community colleges. This forecast is based on Watson's belief that educators, in general, but more important, community college educators, are optimistic of the future. Partly due to the continuous growth in the number of adults returning to or beginning postsecondary education and the continuous need for retraining, community colleges can expect continued growth in enrollments (Harrington, 1977, p. 4; Watson, 1980, p. 1; Schmid and Russell, 1980, p. 6). This growth reflects the cultural recognition for lifelong learning in an increasingly complex society (Kavanaugh, 1979). Though the forecast is for continued growth accommodating the lifelong learning movement, Gleazer (1980) in his study found that community colleges and federal policies do not adequately provide a mechanism for lifelong education and suggests the policies be reshaped to reflect this growing need if community colleges are to be responsive in this period.

Cosand (1979), writing on survival strategies for community colleges in the 1980s, views the competition for students and finances among postsecondary institutions as extremely competitive. Cooperation will be uniquely important to the colleges. "Cooperating institutions can serve their students far better at less cost and better quality of instruction" (p. 2) and that this cooperation must involve all segments of the community. Cosand believes that through cooperation, the community will be better served (p. 10).

Scigliano (1981) anticipates similar problems confronting community colleges: Economic uncertainty; competition; accountability;

and increased federal regulations. Community colleges will survive by marketing; that is, the people are satisfied with the services they receive (p. 16). Colleges will also survive by strategic planning, the identification of institutional strengths and weaknesses, opportunities and threats to develop a more flexible and resilient organization better able to respond to new challenges (p. 17). Cosand (1979) advances similar concerns for marketing and planning: "True marketing must be understood. . . . There must be a concerted effort . . . to determine those educational needs in the community which can be met by the community college" (p. 11). The Carnegie Council (1980) states that the "road to survival now leads through the marketplace" (p. 30). Schmid and Russell (1980) refer to the colleges' need to respond and call for community colleges to develop and institute new curricula matching changing labor market demands.

Several topics emerge in the literature impacting on the community college future. While there appears to be little effort on behalf of the researchers to prioritize the issues, one predominates in the literature reviewed, i.e., the need for community colleges to provide educational opportunities for those constituency groups traditionally not served or underserved by postsecondary education. Community colleges as a group seem well-prepared to provide educational opportunities for the adult returning student (Harrington, 1977; Schmid and Russell, 1980, p. 6). Traditionally, unserved students have not fared as well and these groups will be growing in numbers over the next decade.

Currently, "more than half of the students from minority groups who enroll in postsecondary institutions enroll in two-year colleges" (cited in Educational Resource Information Center, 1981, p. 3). Additional Blacks will seek postsecondary education (Carnegie Council, 1980, p. 42), and community colleges will need to respond to their needs (Schmid and Russell, 1980, p. 6). Hispanics (Cubans, Chicanos, Puerto Ricans) who traditionally have not participated in postsecondary opportunities represent the fastest growing minority group. No hard data are available to forecast future participation rates. "However, to the extent that their participation rates rise and to the extent that there will be more, even considerably more, of them, this will affect overall enrollment numbers favorably for both males and females" (Carnegie Council, 1980, p. 43). Community colleges will need to develop programs designed for the special needs of these groups.

Other underserved groups which will participate more in postsecondary education are the handicapped, retired persons (Schmid and Russell, 1980, p. 6), and persons who require basic literacy development (Watson, 1980, p. 2). Community colleges will be required to adjust their instructional approaches to accommodate the unique needs of these students.

Watson (1980), in addition to forecasting enrollment patterns in the 1980s, expects retention efforts, grade inflation, increased intra-agency cooperation, increased efforts in international education, and the need to "exploit the new technologies" available to higher education (pp. 2-3) to dominate community college activities. Koltai (1980)

anticipates continued pressures for financing community colleges resulting in increased state and local controls. Management, in its response to these changes, must increasingly rely on institutional research and planning. Koltai also believes that accountability, student consumerism and marketing will be other considerations as colleges face the 1980s (pp. 2-3).

As community colleges enter the 1980s and 1990s, management must provide the leadership that responds to the problems as new opportunities and challenges. Koltai (1980), Chancellor of the Los Angeles Community College District, best summarizes community college futures and their expected response: "Change is constant. The only difference now is that more of the forces affecting our colleges are undergoing more rapid change than ever before. We will respond to all of them; we have no other choice" (p. 3).

The Delphi Theory and Technique

The Delphi technique is simply a method for eliciting and refining group judgements until consensus is reached. This is accomplished among an identified group or panel of experts without face-to-face encounters (Linstone and Turoff, 1975). The process is typically a paper-and-pencil questionnaire consisting of a series of items using a rating scale. Respondents are asked to react to each item, and the questionnaire is administered in two or more rounds until consensus or convergence of opinion is reached (Sachman, 1975).

An historical view. The term "Delphi" appears in early Greek history. Delphi was the most consulted oracle in Greece; people from all regions of the Mediterranean area came to "consult" her about the future. Similar to that time of the Greek Oracles, the term "Delphi" refers to a forecasting of future conditions. The major application of the Delphi technique "is the process of gathering of expert opinions among the nationwide 'advice community' on which governmental decision-makers frequently rely (Linstone and Turoff, 1975, p. xx). The technique was first developed by Olaf Helmer and his colleagues at the Rand Corporation for use in defense projects. At the time of the development of the technique, Helmer (1967) believed that concern and awareness of the future was emerging; "that there was a growing recognition that it is important to do something about the future; and methodologically, in that there are new and more effective ways of in fact doing something about the future" (p. 1). Helmer further believed that

. . . the so-called soft sciences are on the verge of a revolution. The traditional methods of the social sciences are proving inadequate to the task of dealing effectively with the ever-growing complexity of forecasting the consequences of alternative policies and thus furnishing useful planning aid to high-level decision-makers in the public and private sectors. This situation is now rapidly being remedied, by introducing new methods . . . and a systematic approach to the utilization of expert opinions (p. 3).

In 1963, Helmer and Dalkey, with help from Brown and Gordan, incorporated "interaction with controlled feedback" (Dalkey, 1969, p. 5) which established a list of procedures called "Delphi." The development of this technique was based primarily on the "age-old adage that 'two

heads are better than one,' when the issue is one where exact knowledge is not available" (Dalkey, 1969, p. v).

There are two different types of the Delphi technique.

"Exploratory" Delphi has been developed for the "deliberate shaping of judgements" (Weaver, 1972, p. 3), and "Normative" Delphi which has grown from the exploratory technique. Its principal purpose was for shaping goal priorities. Weaver (1972) discusses the two types:

The basic idea in the exploratory Delphi, the "deliberate shaping of judgements" through informative feedback, has been uprooted and transplanted with goal information. This use of Delphi is clearly normative. For the most part, these transplants from the original method differ as follows. Rather than speculating about what is probable within a given time frame in the future, the normative Delphi focuses on establishing what is desirable in the form of goal and priorities. The idea of information feedback differs. Rather than revealing the dates and probabilities others assign to future event statements, respondents in the normative Delphi learn the priorities which others assign to goal statements. . . . First, the substance has to do with what one thinks is desirable (normative), rather than what one thinks is probable (exploratory).

Second, the normative Delphi may be thought of as not strictly temporal. Whereas the exploratory Delphi is always concerned with rather specific future dates, the panelists usually are not asked to assign a specific date of occurrence to goals, although in some studies, rather general time frames are implied such as "over the next decade and one-half." The main function of Delphi, opinion shaping through feedback, is common to both forms (p. 3).

In the mid-1960s, several experimental Delphi studies were conducted in an effort to improve reliability and validity. Different types of feedback were used to determine if one type yields more accurate estimates than another type in the Delphi process. Brown and Helmer (1964) found improvement in estimates in responses of self-rated

sub-groups. Campbell (1966) could not find evidence to support this. Dalkey (1967) in his experiments with self-rated sub-groups had inconclusive findings.

Weaver (1972), in his review, noted that "people tend to shift their estimates toward a group norm under conditions of iteration and is, on the basis of several controlled experiments with Delphi, a consistent and solid observation." Since 1964, when Gordan and Helmer completed their study on the forecasting of technological events, the Delphi technique has been used increasingly as a forecasting tool.

The Delphi procedure. "The Delphi technique is an intuitive methodology for eliciting, refining, and gaining consensus from a conceived panel of experts regarding an issue" (Thornton, Tanner and Cooper, 1973, p. 50). A basic use is identifying both majority and minority opinions on future events. The researcher, using Delphi data, is able to make more rational judgements of a given situation or circumstance. Skutsch and Hall (1973) define Delphi as "a method for obtaining group judgements on factual matters for which precise information is a matter of opinion" (p. 2).

The Delphi technique, in its simplest form, eliminates committee activity among the experts altogether and replaces it with a carefully designed program of sequential individual interrogations (usually best conducted by questionnaires) interspersed with information and opinion feedback (Helmer, 1967, p. 7).

Dalkey, Brown and Cochran (1970) believed that

. . . one of the strongest appeals of the Delphi procedure is that it tends to rely on the information already "available" to respondents in terms of their present expertise, plus whatever materials they have readily at hand (p. 29).

Weaver (1972) believed that Delphi is particularly suited to educators helping them to focus on the future; a need identified by Helmer in developing the theory. Weaver states that Delphi,

. . . in combination with other tools, is a very potent device for teaching people to think about the future in much more complex ways than they ordinarily would: what this means is that initially the way we want to get educators (in our case) to make better decisions--decisions which account for alternative consequences--is to help them think in more complex ways about the future (Preface, p. ii).

The degree of accuracy in consensus opinions has yet to be proven. In addition, there is concern whether merely thinking about the future has any value. Regardless of these concerns, the technique can be utilized for the "molding of opinion" (Cypert and Gant, 1970, p. 421).

One problem which arises with Delphi is the number of times a questionnaire should be administered. There appears little agreement to the question. Cypert and Gant (1970) noted that respondents changed their opinions on the third round. Dalkey (1969), reviewing studies conducted by the Rand Corporation, found that convergence generally occurs between the first and second rounds. He also noted that convergence takes place when feedback is provided. Linstone and Turoff (1975) noted that "respondents are sensitive to feedback of the scores from the whole group and tend to move (at least temporarily) toward the perceived consensus" (p. 234). They continue "that the stability of the distribution of the group's response along the interval scale over successive rounds is a more significant measure for developing a stopping criterion than degree of consensus" (p. 234).

The specific steps involved in conducting the Delphi study, described by Thornton, Tanner and Cooper (1975), include:

A questionnaire (Probe I) which is sent to a group of experts who are anonymous to each other and asked to make independent judgements about an assigned topic. The original questionnaire may utilize one of the following two approaches: (1) inductive, which is merely a blank paper asking for individual responses, or (2) deductive, when some open-ended questions may be commented on and rated (p. 51).

Analysis of the first questionnaire takes place at the earliest possible interval and a second questionnaire is developed from the responses to the first. This questionnaire (Probe II) is returned to the same group of respondents who are provided group and individual feedback. The respondents are allowed to revise their responses if they choose. When the interquartile range is provided as part of the feedback, those responding outside of the range are asked to reconsider their answers or comment in comparison to their deviation from the group. The responses of Probe II are again tabulated and returned to the group for any additional adjustments (Probe III). This process continues until consensus (or disagreement) of the group to each item is determined. Generally no more than three rounds are required to determine the degree of consensus. In those situations where consensus is not gained, the technique "would have served the purpose of crystallizing the reasoning process that might lead to one or several positions on an issue and thus help to clarify the issue even in the absence of a group consensus" (Helmer, 1974, p. 9).

The Delphi technique in education. The Delphi technique has been used for educational planning throughout the past fifteen years. While it was originally developed as a tool in forecasting scientific and technological change, it has promise in the educational setting (Weaver, 1972). Educators are increasingly more concerned with issues regarding the future. This is evident in the recent surge in literature with both books and journal articles addressing themselves to future concerns. Linstone and Turoff (1975) view Delphi as an educational tool as well as a planning tool (p. 82).

Parker and Taylor (1980) used the Delphi technique to identify and clarify competency-based education issues in adult education and to suggest solutions to these issues. The U.S. Office of Education, Division of Adult Education staff, former U.S. Office of Education regional program officers, state directors of adult education and a group of invited participants were involved in the study. As a result, eleven major areas were identified as crucial in considering competency-based adult education.

Stephens (1978) used Delphi to conduct an exploratory study to gain consensus on goals for learning resource centers in comprehensive community colleges. Thirty experts were randomly chosen from a group of 150 potential participants. Some 266 goal statements were initially compiled and narrowed to 103 items between rounds one and two. Stephens found that Delphi was applicable to the study and produced consensus between rounds two and three.

Simpson and Brown (1977), using a modified Delphi method, sought to validate a list of competencies for secondary school science curriculum. Their study involved participants in two states, Colorado and Georgia. In addition to the competencies reviewed, analysis of variance was used to determine if there were significant differences among the participants in the two states. None were found.

Glass (1976), conducting a modified Delphi study of Virginia Community College's Continuing Education and Community Service Divisions, sought to gain agreement on a list of goals for these divisions and to further test Weaver's hypothesis that the Delphi technique can be used to shape judgements. Glass found that Delphi was "relatively ineffective in shaping judgements" (p. 106) and that the goals identified should be used as a "beginning point for developing a comprehensive plan for continuing education and community services" (p. 107). Murphy (1976), studying Massachusetts Community College Continuing Education and Community Service Programs, sought to identify present and anticipated problems for the administration and to establish priorities for solving the problems. Respondents included presidents and continuing education and community service deans. His study identified problems in financing, staffing, and organizational structure and that of all the problems identified, the majority (24 of 26) dealt with the present. Musterman and others (1975) also used a modified Delphi technique to determine alternative futures for continuing education in the midwest (pp. 4-5). As a result of the study, projections were made for organizational structure, programs, and finances. Musterman

concludes that there are alternative futures for continuing education and that they are necessary to satisfy the educational needs and demands of society.

Rossman and Carey (1973) used Delphi to identify training needs of teachers and administrators in adult learning centers in Massachusetts. This application of Delphi was more closely related to needs assessments, but it was used as a basis for planning in-service staff development programs.

The Delphi technique has several disadvantages primarily focusing on the strength of the data. This is due to the appearance of bias in responses and degrees of reliability. There is also concern of the selection of the panel of experts, there being no general rule to select it (Linstone and Turoff, 1975, p. 68).

Weaver (1972) believes

Delphi forecasts come up short because there is little emphasis on the grounds or arguments which might convince policy-makers of the forecasts' reasonableness. There are insufficient procedures to distinguish hope from likelihood. Delphi at present can render no rigorous distinction between reasonable judgement and mere guessing; nor does it clearly distinguish priority and value statements from rationale arguments, nor feelings of confidence and desirability from statements of probability (Preface, p. ii).

The result of this is that decision-makers may not see value in the forecast and therefore choose not to act. The value then, of the forecast, is diminished.

Weaver (1972) poses a remedy to this situation:

In order for a forecast to convince men of reason to take some action, on the basis of an argument presented through a forecast, then the forecast must entail a plausible

explanation of what is expected--both why one should be convinced to act, and why, if one failed to act, the consequences foreseen are the most reasonable consequences to expect (p. 8).

Therefore, if change is to occur as a result of a Delphi study, additional information substantiating the need for change must be presented.

Summary

Community colleges evolved from the junior college; the major growth period occurring in the 1960s. Five purposes distinguish community colleges from other postsecondary institutions. These include: transfer; general education; occupational; student service; and community service programs. Continuing education community service programs are the newest function for community colleges. In Massachusetts regional community colleges, these divisions are responsible for all educational offerings during the evenings (after 5:00 P.M.) and on weekends. The divisions are required to be financially self-supporting.

Postsecondary education faces an uncertain future. Economic conditions, enrollment changes, competition, accountability and increased regulations will influence administrative decisions. Community colleges will face these concerns as well as the need to respond to educational access by groups which have traditionally been underserved by higher education. Management at all levels will be required to respond to these changes with new and updated skills.

The Delphi technique, considered as one of the most effective methods for forecasting future events, seeks to gain consensus among a group of experts. The technique has been used to help clarify various

types of educational problems through a paper-and-pencil questionnaire administered over two or more rounds until agreement is determined. Though Delphi has its limitations, it is effective in motivating people to think about the future.

C H A P T E R I I I

METHODOLOGY

The purpose of this Delphi study was to gain consensus among Massachusetts community college continuing education and community service deans and assistant deans on administrative proficiencies for these positions during the 1980s and 1990s. This chapter presents the design of the study; the development of the instrument; the selection of Delphi respondents; the administration of the instruments; data collection; and data analysis procedures.

Design of the Study

The Delphi technique, used for this study, elicits and refines group judgement until consensus is reached. This is accomplished among identified experts without face-to-face encounters (Linstone and Turoff, 1975). The Delphi methodology used in this study is considered "exploratory Delphi" in that it shapes judgements through controlled feedback. Another characteristic of exploratory Delphi is the forecasting desired is based on a stated time period--the next decades, or a specific date (Weaver, 1972, p. 3).

Respondents were provided group and individual feedback and the opportunity to make comments explaining why a chosen response was made. The process used was a paper-and-pencil questionnaire consisting of a series of items using a Likert rating scale. Respondents were asked to react on a scale of one (1) to five (5) indicating "Agreement" to

"Disagreement" to each item. A neutral response was included in the scale.

Delphi is applicable to this study in that the area of inquiry, the identification of administrative proficiencies, "does not lend itself to precise analytical techniques but can benefit from subjective judgements on a collective basis" (Linstone and Turoff, 1975, p. 4). The appeal of Delphi to this study is that it relies on information readily available to the experts (Dalkey, Brown and Cochran, 1970, p. 29).

Two groups were used in this study. The first group, the "panel of experts" provided the proficiency items which were used in developing the final Delphi questionnaire. The second group, "the respondent group," rated the items as part of the Delphi process. Linstone and Turoff (1975) identify this design as "conventional Delphi" when a team of experts completes one questionnaire and a larger group responds to a second questionnaire with at least one opportunity to reevaluate original answers (p. 5).

The Instrument

Four major steps are characteristic of the traditional Delphi process. Uhl (1971) and Thornton, Tanner and Cooper (1975) describe the steps:

1. A questionnaire is developed by asking participants to list their opinions or predictions to a specific activity;
2. Respondents receive the instrument and are asked to evaluate the list by a criterion or rating scale;

3. Respondents receive the list with a summary of group responses. They are asked to reevaluate opinions and make revisions if in the minority;
4. Each respondent receives the list again with updated summaries and is asked to revise opinions or, if he/she chooses to remain in the minority, to state the reasons.

The development of the instrument for this study was consistent with the steps described by Thornton, Tanner and Cooper (1975), Uhl (1971) and Helmer (1967). The initial step (Phase I) was to choose the panel of experts whose task was to list those proficiencies each believed would be essential to community college continuing education community service administrators. Helmer (1967) cautions that "(1) select your experts wisely, and (2) create the proper conditions under which they can perform most ably" (p. 5).

While there are no general rules to select a panel of experts in Delphi studies (Linstone and Turoff, 1975, p. 68), a high degree of importance was given to the process. Those chosen were viewed as knowledgeable of the topic under study, and for having information readily available. Dalkey, Brown and Cochran (1970) believe these criteria important in the selection process (p. 29). The panel members were experts in their field and possess "an applicable speciality or relevant experience" (Linstone and Turoff, 1975, p. 68) of the research.

Other criteria were used in the selection of panel members, which, according to Weatherman and Swenson (1974), affect validity and reliability. These factors were: representation, appropriateness and competence, and commitment.

1. Representation: It was viewed important to have wide representation in the identification of proficiencies which would be used in developing the final Delphi questionnaire for the respondent group. This was done to minimize the potential of isolating information. In addition, wide representation would reduce the biases that can result from a homogeneous group of individuals employed in comparable positions within the same system.
2. Appropriateness and Competence: Each member of the panel had demonstrated competence in and were appropriate to the area under inquiry.
3. Commitment: The panelists were seen as having a commitment to completing the questionnaire. The particular qualities or insights each would bring to the study were equally important (Murry and Turoff, 1975, p. 59).

In October, 1981, a questionnaire was mailed to the panel of experts. The panel was comprised of 11 former presidents of the National Council of Community Services and Continuing Education, an affiliate council of the American Association of Community and Junior Colleges; and seven nationally recognized leaders in the areas of continuing education, community services, adult education, and community college education. Eighteen questionnaires (Appendix A) were mailed requesting that each panel member identify proficiencies needed by community college continuing education community service administrators during the 1980s and 1990s. Dalkey (1969) examined the number of experts to include on a panel and found that validity and reliability increase when the size of the group increased. Martino (1972) studied the dropout rate with Delphi and found typical response rates on the first round at 50 percent. He also found that "with a panel of no larger than 15, consisting of a cross-section of experts in the given

field, it is highly unlikely that another equally expert panel will produce a radically different median (p. 49). The number chosen in the panel of experts (Phase I) is consistent with the cited research.

The "inductive approach" was used to solicit responses. This approach is essentially "a blank piece of paper asking for individual responses" (Thornton, Tanner and Cooper, 1975, p. 51). Each member was asked to identify proficiencies. The researcher used the information from Phase I as the basis for developing the final Delphi questionnaire.

Upon receipt of the 11 questionnaires and subsequent analysis, a preliminary questionnaire was developed in May, 1982. This was considered Phase II of the development of the instrument. Based on the data received, 77 specific proficiencies were identified and grouped into seven topic areas. This preliminary questionnaire was distributed to four community college professionals employed in the Virginia Community College System for feedback on ambiguity and clarity for each proficiency. The goal was to delete unnecessary or duplicate items. Helmer (1967) addresses the need for a single position when several experts are used (p. 5). After the group had received the questionnaire and had sufficient time to review it, the researcher met with each individually to review the instrument. As a result of these meetings, a Delphi questionnaire comprising 65 questions grouped into seven topic areas was developed.

Two major proficiency themes were identified in the Phase II process. These themes formed the basis of the seven topic areas. One theme related to specific skill areas which can generally be acquired

through coursework. These include: finance; planning; research and evaluation; organizational structure; staff development; and community roles. The second theme addresses personal characteristics needed by the effective administrator; areas which reflect more closely of the personality rather than cognitive areas. These two themes were also consistently identified in the literature reviewed (Chapter II).

The third major phase of the development of the questionnaire was to pilot test a draft for completeness, ambiguity, and clarity. To test the draft, three administrators employed in the Virginia Community College System were selected as the test group. The group was selected on the basis of each member's knowledge of the study, the level of understanding of continuing education and community service programs, and knowledge of management issues confronting community college administrators. Through personal discussions, it was determined that the proficiency statements were clear, complete, and appropriate to this study.

Selection of Delphi Respondents

The selection of the Delphi study population, or respondent group, was based on the expertise and knowledge each would apply to the study. Helmer (1967) notes that the researcher should "select your subjects wisely" (p. 5). The determination was made that the deans and assistant deans of continuing education and community services in Massachusetts community colleges possessed the expertise and knowledge appropriate to this study. These individuals are responsible for the operations of the

divisions including staffing, budgeting and programmatic decisions. These individuals are also in positions that potentially can effect change once the Delphi data are presented to them, an issue Weaver believes essential.

At the time of the study, 14 deans, one acting dean and 13 assistant deans of continuing education and community services were employed in Massachusetts community colleges. Also included in this study was one assistant to the dean of continuing education and community services. Twenty-nine individuals comprised the study group.

Administration of the Instrument

The questionnaire was mailed to respondents on 7 May 1982. To maintain a reasonable time between each round, respondents were requested to complete and return the questionnaire within five days of receipt. A cover letter (Appendix B) introduced the respondents to the nature of the study. Respondents were advised not to think in terms of what they might acquire for skills, but rather, what will be needed to satisfactorily administer the divisions during the 1980s and 1990s.

Each major proficiency area was introduced by a category heading to assist respondents to focus toward that particular administrative area. The proficiencies were categorized as: finance; planning; research and evaluation; organizational interaction; staff development; community role; and personal characteristics. Space was provided for respondents to make comments if they wished to provide additional information or communicate with the researcher.

Nineteen completed questionnaires (66 percent) were returned within three weeks of the mailings. This return rate, higher than those noted by Martino (1972), is attributed to the personal telephone calls made to respondents who had failed to return the instrument in the stated time period.

Responses to this questionnaire, or Delphi Questionnaire #2, were tabulated in terms of the median and interquartile range for each item. This statistical feedback procedure is called for in the Delphi technique. All feedback was the basis for the third questionnaire.

The third questionnaire, or Delphi Questionnaire #3, was similar to the second except that it contained statistical information tabulated from Round Two. The instrument (Appendix C) was mailed on 9 June 1982 to the 19 respondents who had completed Delphi Questionnaire #2.

Each respondent was asked to review his/her responses to Delphi Questionnaire #2 in comparison to the group response, and to make revisions if in the minority. If the respondents chose to remain in the minority, they were requested to give the rationale for that position. The old rating was provided on the questionnaire under the heading "Old Answer" and was recorded in red ink for easy identification.

Responses were again calculated from the returned questionnaires and were the basis for the final analysis. As was found in the second round, personal telephone calls were conducted to insure each instrument was returned. Each of the 19 questionnaires were returned.

Collection and Analysis of Data

The data were collected over three rounds of the Delphi procedure. Once collected, the next step was to determine the degree of consensus, or disagreement if that were the result, for each proficiency item. To achieve this goal, analysis was based on the research question posed:

What degree of consensus will be reached within the group of deans and assistant deans of continuing education and community services in Massachusetts community colleges for each of the proficiency statements and for each iteration of the Delphi questionnaire?

With the research question posed, the procedure was to determine the percentage of respondents who were in agreement. A decision was made by the researcher prior to the data collection procedure that three-fourths or 75 percent of responses either to the left or right of the neutral position would constitute consensus. It was assumed, in support of the research, that convergence of opinion would occur over subsequent rounds if feedback were provided.

Feedback was provided to shape judgement in rounds two and three. Therefore, data analysis became a procedure of determining the extent of consensus for each proficiency item.

The researcher had determined that separating out deans' responses and assistant deans' responses would serve no research purpose. This was based on the belief that both positions require similar proficiencies for equal job responsibilities. It was also the researcher's belief that providing separate group responses may influence or pressure assistant deans to change responses when they, in fact, had no desire to do so. Therefore, a single element, the percent of respondents in

agreement, became the factor of analysis for the research question.

In addition to the analysis based on the research question, observations were conducted of the two groups' responses (the panel of experts and the respondent group). This observation was to determine support for or against research conducted by Brown and Helmer; Campbell, and Dalkey on reliability of data from select groups.

C H A P T E R I V

ANALYSIS OF THE DATA

The responses and results of the three Delphi questionnaires are presented in this chapter. The analysis of the data is based on whether consensus was achieved among the study group on the proficiencies which will be required to satisfactorily perform job responsibilities. The analysis was tested by the following research questions:

What degree of consensus will be reached within the group of deans and assistant deans of continuing education and community services in Massachusetts community colleges for each of the proficiency statements and for each iteration of the Delphi questionnaire?

With the research question posed, the procedure was to determine the percentage of respondents selecting the same proficiency for each item on each round of the Delphi questionnaire. Prior to the research, the researcher made the decision that consensus was achieved when 75 percent of the responses was either to the left (indicating disagreement with the proficiency statement) or to the right (indicating agreement with the proficiency statement) of the neutral position. This threshold was chosen to determine clearly which proficiencies were viewed essential versus those items where confusion or disagreement remained as to the need for that proficiency. The literature review had not demonstrated a specific level when consensus was achieved and it remained at the discretion of the researcher. This threshold also minimized the potential for ambiguity in the analysis. This procedure allowed observations on the extent of agreement or disagreement on judgements over the rounds of the Delphi process.

Analysis of Round One of the Delphi questionnaires was based on the extent to which the panel of experts listed proficiency items which resembled those which were found in the literature review. No specific quantity or quality was used as judgements on these responses.

Responses to the Delphi Questionnaires

Because two phases were used in the data gathering, analysis of the responses is presented in Phase I (Round One of the data gathering) and Phase II (Rounds Two and Three). Phase II data are presented by rounds. The two phases of the study were based on the conventional Delphi procedure utilizing two groups: a panel of experts providing data for the identification of items which were then used to develop the final questionnaire; and the study group which responded to the final questionnaire.

The initial questionnaire (Round One) was mailed to the panel of 18 experts. Upon receipt of the completed questionnaires, the results were tabulated and used to develop the final instrument. The final Delphi questionnaire was mailed to 15 deans, 13 assistant deans, and one assistant to the dean of continuing education and community services.

Results

Round One. The results are presented in rounds. Round One results are based on the questionnaire to the panel of experts. The questionnaire was inductive in design, allowing the experts open-ended responses to the broad question: "List as many proficiencies which you believe

essential." Eighteen questionnaires were mailed to the panel of experts in October, 1981, requesting a list in response to the question. Eleven responses, a 61 percent rate, were returned. This rate is higher than the typical 50 percent return rate found by Martino (1972), but is not significantly higher to influence reliability.

As expected and desired, a broad range of proficiency items were identified. Seventy-seven proficiency statements were listed. These statements were reduced to 65 and rewritten into proficiency statements. Two major themes emerged in Round One: the identification of proficiencies which were cognitive and the identification of personal characteristics as proficiencies. The majority of the proficiencies (N=55) were cognitive. Of the two groups included in the panel of experts, the former presidents of the National Council for Community Services and Continuing Education listed proficiencies encompassing both themes while the continuing education, adult education, and community services professionals focused primarily on those proficiencies in the cognitive area. This is perhaps due to the employment backgrounds of the former presidents; each has held administrative positions in community colleges and the responses may reflect personal as well as professional expertise.

The panel's responses, as evidenced by the proficiency items listed in Appendix B (Delphi Questionnaire #1) supported several of the assumptions stated in Chapter I. The assumptions supported include:

1. That adult learning theory will influence the administration of programs;
2. That competition for students will increase and that programs must be developed that are market sensitive and responsive to students' needs;

3. That technology and its application to education will influence administrative decisions;
4. That the need to respond to special groups requiring specialized programs will increase;
5. That financing of courses and accountability will influence administrative decisions.

In addition to the support of the assumptions, the panel's responses closely matched those administrative skill areas which were identified and discussed in Chapter II. Among those supported included: the need for strong and dynamic leadership; the ability to elicit trust; effective communications skills; knowledge of adult learning theory and how that translates into educational programs; an understanding of and commitment to the comprehensive community college philosophy; and the ability to work effectively among peers. Other skill areas supported include: an understanding of societal trends; an ability to manage personnel and financial resources effectively; and, as Mayhew (1979) suggests, the appropriate level of training which equips the administrator with the prerequisite skills for satisfactory job performance.

Summary. As suspected, the first round of the Delphi survey illustrated the need for skills in all areas of educational administration. While analysis of Round One data did not include consensus on proficiency areas, there was evidence to support agreement among the panel of experts on a majority of the proficiency statements. Evidence was present that supported several of the assumptions of this study. There was also support of the skill areas identified in the review of the literature.

Round Two. As discussed in Chapter III, Round Two of the Delphi survey was conducted in May, 1982, among the deans and assistant deans of continuing education and community services in Massachusetts community colleges. The purpose of Round Two was to gain consensus on proficiency items for those administrators, while the purpose of Round One was to identify the proficiency areas. Consensus was determined by 75 percent of the responses either to the left or right of the neutral position.

Twenty-nine questionnaires were mailed. Nineteen, or 66 percent, were completed and returned. Similar to the rate of return for the first round, the Round Two return rate was higher than those found by Martino's study (1972). This higher rate of return is based partly on three separate factors. The researcher knew many of the respondents personally having been employed as a continuing education and community services administrator in one of the Massachusetts community colleges for five years. Secondly, the researcher made personal telephone contacts with those who had not returned the questionnaire within a reasonable time after the stated desired date. Thirdly, the researcher believes the topic was of personal interest and was timely for the group surveyed.

Agreement on specific proficiency items was higher than expected. According to Weaver's hypothesis, the shaping of judgement, or agreement, occurs with each iteration of the Delphi questionnaire. Nevertheless, because the study groups for Rounds One and Two were different and because each group's task was different, Weaver's hypothesis was not seen as applicable.

TABLE 1
RESPONSE DISTRIBUTION FOR ROUNDS TWO AND THREE

Name of School	Number of Completed Questionnaires Received by Institution
Berkshire Community College	1
Bunker Hill Community College	2
Bristol Community College	0
Cape Cod Community College	2
Greenfield Community College	2
Holyoke Community College	2
Massachusetts Bay Community College	1
Massasoit Community College	2
Middlesex Community College	2
Mount Wachusett Community College	1
North Shore Community College	2
Northern Essex Community College	0
Quinsigamond Community College	1
Roxbury Community College	0
Springfield Technical Community College	1

Consensus was reached on 80 percent of the items in Round Two. Although this was higher than expected, several areas emerged where there was disagreement. There was no consensus that acquiring funds from local or state governments was essential (proficiency items 4 and 5). This is perhaps due to the uniqueness of the division's funding base and the fact that the divisions have always operated without state or local support. Another factor may be that the respondents do not view acquiring funds from state and local governments as a responsibility of their position, but a responsibility of the president.

Consensus was not reached in three areas in the planning category. Surprising, though not totally unexpected, consensus was not achieved on the item addressing the application of technologies to management functions and the item addressing knowledge of legal issues in higher education. These two areas received the most attention in the literature on the future of higher education and were consistently identified by the panel of experts in the Round One survey.

In the staff development area, consensus was not achieved on several items. The study group did not believe that the ability to teach effectively was an essential proficiency. This area was also consistently mentioned in the literature review and by the panel of experts. But, this area was supported by continuing education and/or adult educators in both the literature and Round One survey and witnessed only marginal support among the community college continuing education community services group within the panel of experts. Little agreement was found on the need for an advanced degree in higher

education administration. This is perhaps due to the need for these individuals to be more concerned with budgetary versus educational issues. Notwithstanding, it was surprising to find continuing education administrators view the need for continuing education as relatively unimportant.

Summary. Results of Round Two data revealed a higher consensus rate than was expected. Consensus was not achieved on those proficiency items which received the most attention in both the literature and by the panel of experts in Round One. Agreement was achieved in many of the administrative skill areas that are current to the position. Results are found in Table 2.

Round Three. The third instrument was mailed to the 19 respondents who had returned Delphi Questionnaire #2 on 9 June 1982. Similar to the time limit for Rounds One and Two, respondents were requested to complete and return the questionnaire within five days. Each completed instrument was returned by 29 June 1982. Analysis, based on the previously cited research question, was conducted for each proficiency item and for the seven categories.

Following Round Three of the Delphi survey, consensus was reached on 88 percent of the proficiency items compared to an 80 percent rate found in Round Two. Disagreement remained on eight (or 12 percent) items. The specific areas of consensus versus disagreement are discussed below. Observations are limited concerning the reasons why respondents remained outside of the interquartile range because many

TABLE 2

ROUND TWO: SUMMARY OF RESPONSES

PROFICIENCIES		Rating Scale	Consensus Rate in Percent	Comments
<u>Financial</u>				
1. Ability to operate on profit-making basis	SD	-1	--	
	D	-2	--	
	N	-3	--	
	A	-4	32	
	SA	-5	68	
2. Ability to insure fiscal management of division budgets	SD	-1	--	
	D	-2	--	
	N	-3	5	
	A	-4	32	
	SA	-5	63	
3. Ability to obtain funds for specialized programs	SD	-1	--	
	D	-2	--	
	N	-3	26	
	A	-4	37	
	SA	-5	37	
4. Ability to obtain funds from local governments	SD	-1	--	
	D	-2	16	
	N	-3	26	
	A	-4	48	
	SA	-5	10	
5. Ability to obtain funds through state legislature	SD	-1	--	"no state monies in Massachusetts as you know"
	D	-2	10	"not likely in Massachusetts"
	N	-3	42	"does not apply to Massachusetts"
	A	-4	38	
	SA	-5	10	

TABLE 2--Continued

PROFICIENCIES	Rating Scale	Consensus Rate in Percent		Comments
6. Ability to write proposals	SD -1	--		
	D -2	--		
	N -3	5		
	A -4	37		
	SA -5	58		
7. Ability to allocate funds for maximum benefit	SD -1	--		
	D -2	--		
	N -3	--		
	A -4	32		
	SA -5	68		
<u>Planning</u>				
8. Ability to recognize trends in occupational areas	SD -1	--		
	D -2	5		
	N -3	--		
	A -4	37		
	SA -5	58		
9. Ability to design programs for publics previously excluded	SD -1	--		
	D -2	--		
	N -3	11		
	A -4	52		
	SA -5	37		
10. Ability to exhibit flexibility in planning programs	SD -1	--		
	D -2	--		
	N -3	--		
	A -4	21		
	SA -5	79		

TABLE 2--Continued

PROFICIENCIES		Rating Scale	Consensus Rate in Percent	Comments
11. Ability to develop networks with community agencies to provide needed services to constituency groups	SD	-1	--	
	D	-2	5	
	N	-3	21	
	A	-4	37	
	SA	-5	37	
12. Ability to develop programs versus "one-shot deals"	SD	-1	5	"nothing wrong with one-shot deals"
	D	-2	16	
	N	-3	16	
	A	-4	47	
	SA	-5	16	
13. Ability to develop appropriate contingency plans	SD	-1	--	
	D	-2	--	
	N	-3	26	
	A	-4	42	
	SA	-5	32	
14. Ability to develop and systematically review annual plans	SD	-1	--	
	D	-2	--	
	N	-3	5	
	A	-4	53	
	SA	-5	42	
15. Ability to organize the division which maximizes staff resources	SD	-1	--	
	D	-2	--	
	N	-3	5	
	A	-4	27	
	SA	-5	68	

TABLE 2--Continued

PROFICIENCIES		Rating Scale	Consensus Rate in Percent	Comments
16.	Ability to prioritize activities of division	SD -1 D -2 N -3 A -4 SA -5	-- -- 11 11 78	
17.	Ability to use a variety of data in decision-making process	SD -1 D -2 N -3 A -4 SA -5	-- 5 5 47 43	
18.	A working knowledge of the latest technologies and its application to management functions	SD -1 D -2 N -3 A -4 SA -5	-- 11 16 41 32	
19.	Ability to use modern marketing methods applicable to community colleges	SD -1 D -2 N -3 A -4 SA -5	-- -- -- 32 68	"not enough being done in this area"
20.	Knowledge of public relations and advertising techniques	SD -1 D -2 N -3 A -4 SA -5	-- -- 5 48 47	

TABLE 2--Continued

PROFICIENCIES	Rating Scale	Consensus Rate in Percent	Comments
21. Ability to supervise people and programs	SD -1 D -2 N -3 A -4 SA -5	-- -- -- 42 58	
22. Knowledge of higher education laws and their impacts for decision making	SD -1 D -2 N -3 A -4 SA -5	-- 11 32 41 16	
<u>Research/Evaluation</u>			
23. Ability to conduct community needs assessments	SD -1 D -2 N -3 A -4 SA -5	-- 5 11 52 32	
24. Ability to analyze information generated from formal assessments	SD -1 D -2 N -3 A -4 SA -5	-- -- 5 68 27	
25. Ability to analyze information generated from informal structures	SD -1 D -2 N -3 A -4 SA -5	-- -- -- 63 37	"very much so"

TABLE 2--Continued

PROFICIENCIES		Rating Scale	Consensus Rate in Percent	Comments
26.	Ability to evaluate programs/ courses using sound techniques	SD -1 D -2 N -3 A -4 SA -5	-- -- -- 53 47	
27.	Knowledge of community impact studies and implications for the college	SD -1 D -2 N -3 A -4 SA -5	-- -- 16 58 26	
28.	Ability to modify programs to apply to local needs and ongoing changes	SD -1 D -2 N -3 A -4 SA -5	-- -- 11 36 53	
29.	Ability to demonstrate accountability for division's activities	SD -1 D -2 N -3 A -4 SA -5	-- -- -- 42 58	
30.	Ability to bring continuing education students into the evaluation process	SD -1 D -2 N -3 A -4 SA -5	-- -- 11 42 47	"they are now and forever shall be"

TABLE 2--Continued

PROFICIENCIES		Rating Scale	Consensus Rate in Percent	Comments
<u>Organizational Interaction</u>				
31. Ability to work cooperatively and professionally with the entire college faculty/staff in decision-making process	SD	-1	--	"only when appropriate--should not dilute decision-making"
	D	-2	--	
	N	-3	16	
	A	-4	26	
	SA	-5	58	
32. Ability to coordinate programs with appropriate college personnel	SD	-1	--	"ongoing at all times"
	D	-2	--	
	N	-3	--	
	A	-4	37	
	SA	-5	63	
33. Ability to articulate the continuing education/community service role within the institution	SD	-1	--	
	D	-2	--	
	N	-3	--	
	A	-4	37	
	SA	-5	63	
34. Ability to specifically access the Presidential decision-making process when appropriate	SD	-1	--	"definite asset to work directly with the president"
	D	-2	--	
	N	-3	11	
	A	-4	16	
	SA	-5	73	
35. A knowledge of and the appropriate use of college resources	SD	-1	--	
	D	-2	--	
	N	-3	--	
	A	-4	53	
	SA	-5	47	

TABLE 2--Continued

PROFICIENCIES		Rating Scale	Consensus Rate in Percent	Comments
36. Ability to develop networks with other continuing education/community service administrators	SD	-1	--	"when appropriate"
	D	-2	--	
	N	-3	11	
	A	-4	63	
	SA	-5	26	
37. Ability to work effectively with college trustees when appropriate	SD	-1	--	"very important"
	D	-2	--	
	N	-3	16	
	A	-4	52	
	SA	-5	32	
38. Ability to build teams across the organizational lines of the college	SD	-1	--	
	D	-2	--	
	N	-3	11	
	A	-4	42	
	SA	-5	47	
39. Ability to identify meaningful roles for the faculty within continuing education/community services	SD	-1	--	"to a limited extent"
	D	-2	--	
	N	-3	26	
	A	-4	48	
	SA	-5	26	
40. Ability to elicit support for continuing education/community service activities from all academic units	SD	-1	--	"good politics"
	D	-2	--	
	N	-3	11	
	A	-4	42	
	SA	-5	47	

TABLE 2--Continued

PROFICIENCIES		Rating Scale	Consensus Rate in Percent	Comments
<u>Staff Development</u>				
41. Ability to recruit, employ and retain a talented full- and part-time non-instructional staff	SD	-1	--	
	D	-2	--	
	N	-3	--	
	A	-4	26	
	SA	-5	74	
42. Ability to recruit, employ and retain talented faculty members	SD	-1	--	
	D	-2	--	
	N	-3	5	
	A	-4	26	
	SA	-5	69	
43. Knowledge of a variety of instructional methods and appropriate applications for each	SD	-1	--	
	D	-2	--	
	N	-3	5	
	A	-4	69	
	SA	-5	26	
44. Ability to develop the talents of all faculty and staff members	SD	-1	--	"much needed and continuous process"
	D	-2	--	
	N	-3	26	
	A	-4	42	
	SA	-5	32	
45. The ability to maintain harmony among the staff	SD	-1	--	"tough role for dean"
	D	-2	--	
	N	-3	11	
	A	-4	42	
	SA	-5	47	

TABLE 2--Continued

PROFICIENCIES		Rating Scale	Consensus Rate in Percent	Comments
46.	Ability to teach effectively	SD -1 D -2 N -3 A -4 SA -5	-- 11 21 21 47	"not only in classroom, but teacher of managers and staff" "important for faculty"
<u>Community Role</u>				
47.	Ability to work effectively with all community groups	SD -1 D -2 N -3 A -4 SA -5	-- -- 11 63 26	"necessary for survival in a self- supporting program"
48.	Ability to articulate the continuing education/community service role within the com- munity	SD -1 D -2 N -3 A -4 SA -5	-- -- 5 48 47	
49.	Ability to develop collaborative relationships with business and industry	SD -1 D -2 N -3 A -4 SA -5	-- -- -- 26 74	"very much so" "this area needs lots of work from business side as well as colleges"
50.	Ability to develop collaborative relationships with public and private organizations	SD -1 D -2 N -3 A -4 SA -5	-- -- 5 42 53	"to a degree that cooperation doesn't become competition with other publics"

TABLE 2--Continued

PROFICIENCIES		Rating Scale	Consensus Rate in Percent	Comments
51. Ability to develop collaborative relationships with area educators, governmental and community agencies	SD	-1	--	
	D	-2	5	
	N	-3	5	
	A	-4	47	
	SA	-5	43	
52. Understanding of sociology and the implication for continuing education/community services on local mores and values	SD	-1	--	"if you don't know your community and haven't demonstrated the ability to work the community, then your program is in trouble" "colleges shouldn't be social service agencies"
	D	-2	11	
	N	-3	47	
	A	-4	32	
	SA	-5	16	
<u>Personal Characteristics</u>				
53. A genuine sense of humanness and concern with the ability to responsibly project it	SD	-1	--	
	D	-2	--	
	N	-3	11	
	A	-4	36	
	SA	-5	53	
54. An understanding of and commitment to the comprehensive community college philosophy	SD	-1	--	
	D	-2	--	
	N	-3	5	
	A	-4	32	
	SA	-5	63	
55. Ability to communicate clearly	SD	-1	--	"keep dialogue going both ways"
	D	-2	--	
	N	-3	--	
	A	-4	26	
	SA	-5	74	

TABLE 2--Continued

PROFICIENCIES		Rating Scale	Consensus Rate in Percent	Comments
56.	A desire to make the continuing education/community service function/program of the college successful	SD -1 D -2 N -3 A -4 SA -5	-- -- -- 16 84	"he/she has to be aggressive, dedicated, personable and energetic; also believe in your college and program"
57.	Dedication to the needs of the community and to the college's ability to provide services	SD -1 D -2 N -3 A -4 SA -5	-- -- 11 21 68	
58.	The ability to delegate authority clearly	SD -1 D -2 N 3 A -4 SA -5	-- -- -- 32 68	"should be included in any position in higher education administration"
59.	Ability to be firm, fair and objective	SD -1 D -2 N -3 A -4 SA -5	-- -- -- 37 63	"should be included in any position in higher education administration; also be open" "a 5 is impossible in political atmosphere"
60.	Ability to recognize limitations of one's role within the college	SD -1 D -2 N -3 A -4 SA -5	-- 5 -- 48 47	"build a staff around you based on your non-strengths"

TABLE 2--Continued

PROFICIENCIES		Rating Scale	Consensus Rate in Percent	Comments
61.	Ability to inspire confidence and merit respect	SD -1 D -2 N -3 A -4 SA -5	-- -- -- 37 63	
62.	Ability to provide leadership within the college	SD -1 D -2 N -3 A -4 SA -5	-- -- 5 32 63	
63.	Ability to accept personal accountability and responsibility for continuing education/community service activities	SD -1 D -2 N -3 A -4 SA -5	-- -- -- 42 58	"you are in charge. Truman said the buck stops here"
64.	Ability to accept responsibility for all delegated assignments	SD -1 D -2 N -3 A -4 SA -5	-- 5 11 31 53	
65.	Possess advanced degree in higher education administration	SD -1 D -2 N -3 A -4 SA -5	11 31 21 16 21	"Master's, yes; Doctorate, no. However, I believe in continuing one's own education yearly" "lends credibility and clout to the position" "would strongly suggest advanced degree in traditional academic discipline, but <u>not</u> education"

failed to give the rationale as instructed to do so. Several gave overall comments and are reported here.

Individual and clusters of proficiencies have been identified as essential to the effective community college continuing education and community service administrator. These are identified in Chapter II. The problems confronting community colleges in the 1980s and 1990s are complex and include: maintaining adequate enrollments; retaining students; managing reduced resources; developing courses and programs which are market sensitive; improving and adapting instructional delivery systems; incorporating technology and information into management functions; and developing a restive faculty and staff.

Analysis of the proficiency items in relation to the future trends in community college administration suggests that no single proficiency item, or category of related proficiencies, will provide adequate managerial skills. What will be required are managers who combine proficiencies from each of the seven categories appropriate to each administrative decision-making situation.

Finance proficiencies. Seven proficiency statements were listed in this category. Consensus was reached on five of the statements. Consensus had been achieved on four of the items in Round Two. Convergence of opinion occurred, supporting Weaver's hypothesis and the Delphi process. Two items where disagreement remained addressed the ability to obtain funds from state and/or local governments. The respondents' comments refuting the need for these proficiencies tended to indicate that the funding structure (the self-sustaining nature of the divisions)

was not going to change, the belief that time would be used more prudently leaving this responsibility to others, and the desire to keep the divisions "entrepreneurial." By comparison, there was undisputed agreement that the divisions should operate on a profit-making basis, that fiscal management was imperative, and that maximizing the use of available funds were important. The respondents also agreed that the ability to obtain grant funds for special programs was essential, although one who remained in the minority stated that grant funds do not provide for "long-term growth." These proficiency items support the belief cited in Chapter II that community colleges will experience growth in programs responding to special populations.

The maintenance of adequate enrollments will be a principal concern to continuing education community services administrators. Additional importance is given to this concern when recognizing the financial stability of these divisions is dependent on enrollments. This suggests that administrators must possess proficiencies in the categories of finance, planning, research and evaluation, and community roles. Further analysis indicates that the appropriate application of technology in financial analysis, planning, and the research function may facilitate effective strategies responding to this need.

Competition for resources will, similarly, require a combination of proficiencies. Targeted financial support, at all levels of government, will decrease while competition for available funds increases (Schmid and Russell, 1980). Continuing education and community service administrators must plan effectively and determine if efforts to obtain

funds for specialized projects (proposal writing) is an efficient use of human resources. Fluctuating economic conditions and the effects of instructional costs associated with offering courses will require careful scrutiny. Administrators must plan, provide fiscal management and accountability, and offer courses sensitive to market and labor demands. To do less may result in unanticipated revenue shortfalls along with the resultant consequences.

Planning. Fifteen items were included in this proficiency category. Consensus was achieved on ten (66 percent) of the items in Round Two. At the end of the third iteration, consensus was achieved on 13 of the items (86 percent). Disagreement remained on the item "ability to develop programs versus one-shot deals." One respondent commented that "some of [the] most successful programs are one-shot." No additional feedback was given because consensus had not been achieved during Round Two. Disagreement remained for knowledge of legal issues impacting upon decision-making in higher education. This area received considerable attention in the literature and Round One of the Delphi survey.

The Delphi procedure had an effect on bringing agreement on three of the items where consensus had not been achieved in Round Two. The proficiency addressing technologies and their application to higher education achieved consensus supporting one assumption stated in Chapter I, the literature on the future of postsecondary education and Round One data. While consensus was achieved, responses for remaining outside of the interquartile range included: that "one recognizes the

trends and finds the experts" and "this college has very little of the technologies and we manage." Both comments suggest that there is uncertainty of the impact technology will have on both higher education management and instruction. In addition to the Delphi process having an effect on achieving consensus after the third iteration, stronger support (indicated by the percentage increases in "agree" and "strongly agree") was found in eight of the remaining proficiency items.

While it may be difficult to forecast how widespread the use of technology will be as an instructional tool, the data indicate that continuing education community service administrators must be adapt with technology as a management tool. Throughout this period, information will be available increasingly for planning, resource allocation, research, evaluation and marketing functions. Several of the emerging problems confronting community colleges (retention, enrollments, and finances) would be better addressed if administrators were proficient in managing data; and basing decisions on them. This should result in improved planning, and optimal responses to situations which otherwise may negatively impact on the divisions.

Research and evaluation. Complete agreement was found in the eight proficiency items listed under research and evaluation. This agreement was consistent for the second and third rounds. The Delphi process did result in consensus of opinion in two items where respondents shifted support downward towards the median response.

Feedback obtained from respondents suggested that it is far more important to use data appropriately than to collect them; that other

agencies and/or other divisions within the college perform this function; and that the total college must be involved in research and evaluation activities. These comments support the study groups' responses under the "organizational interaction" category where strong agreement was found for cooperation and coordination among all segments of the college.

Curricula improvements responding to labor and market need (Carnegie Council, 1980; Schmid and Russell, 1980) will require of continuing education and community service administrators proficiencies in research, evaluation, planning, entrepreneurship, and the ability to interact among a diverse constituency. These administrators will also need to be knowledgeable of alternative instructional formats and assume leadership roles insuring proper institutional responses. If these divisions cannot respond due to management deficiencies, the colleges and the economic base of the communities may suffer.

The format of instructional offerings will undergo continuous revision throughout the 1980s and 1990s. Technological advances and their application to instruction will impact on each community college. Instructional programs will increasingly be offered via television, radio, cable systems, video and audio systems. Computer-assisted instruction, self-paced and self-directed instruction will increase. In addition, education for an information society must be incorporated into the curricula. These developments, coupled with associated costs, will require proficiencies in finance, planning and evaluation, staff development, and a thorough understanding of adult learning theory.

Adults, attending part-time, will participate more as they identify employment-related opportunities. Therefore, administrators must be able to expand the instructional formats, insure quality, plan and manage the evolution of these alternative approaches. Management will also be required to deal with a faculty which does not place the same degree of importance on these issues. Leadership styles will be equally important for the successful administrator. The increase in adult students will present management with issues beyond adult learning theory concerns. Adults who have been away from formal educational programs generally know what they are seeking. Quality and accountability must be maintained throughout the offerings. Otherwise, as Scigliano (1981) suggests, the institutions' survival will be in jeopardy.

Organizational interaction. Ten proficiency items were listed in this category. Consensus of opinion was achieved on nine (90 percent) of the items. Similar to the other categories, the Delphi process affected convergence of opinion on six of the items, while three remained unchanged between the second and third iteration.

The respondents did not agree on the need to find meaningful roles for faculty within the divisions. In fact, there had been stronger support for this item after Round Two. No comments were received supporting the group's position. Their reluctance to agree on this could be a reflection of the current administrative versus faculty roles which have been brought on by collective bargaining and/or the need to protect territory within the college.

The need to cooperate among institutional divisions will be increasingly important. Institutions must develop strategies to maintain enrollments; reduce attrition; manage resources; develop new curricula; and incorporate technology into the management and instructional functions. Divisions of continuing education and community services will be unable to develop and institute responses in isolation from other institutional divisions. The respondents' support for proficiencies in this category suggests that they are understanding of this need and their role in facilitating cooperation within the institution.

Where disagreement remained, the need to find meaningful roles for faculty within the division suggests shortsightedness on behalf of the respondents. Instructional change will be an important activity throughout the 1980s and 1990s and faculty must have a role in this. Continuing education and community service administrators must develop strategies to address this.

Staff development. The administrators were in disagreement on the need to teach effectively as an administrative proficiency. This could be a reflection that they see little connection between the ability to teach effectively with the ability to manage an instructional division. They may also view their positions as primarily concerned with areas that are less related to instruction, such as planning, financial management, and organizational structure. Because the interquartile range was wide after the second round, all responses to this item fell within the range. Consequently, no feedback was obtained. One respondent, who had been outside of the range after Round Two,

communicated that the term "teach" was reinterpreted as "train" and changed the response to fall within the range.

Consensus was achieved on the remaining five proficiency statements which had been found after Round Two. At the end of the third iteration, respondents increased their support (by percentage of "agree" and "strongly agree" responses) in these five items.

Staff development will be vital to community colleges. These institutions are expected to respond to educational needs continuously. These demands will require a faculty and staff who can provide quality instruction. The increase in adults requires that faculty be knowledgeable of learning theories applicable to adults and continuing education community service administrators must provide the leadership in this trend. This can best be accomplished if the administrator is knowledgeable of learning theories and has the ability to teach effectively.

Community role. Six proficiency items were included in this category. The major issue of concern among the administrators was on one item. Consensus of opinion was not achieved for "understanding of sociology and the implication for continuing education/community services on local mores and values." Respondents' reasons supporting their response to this item ranged from "very important" to "economic issues override sociological ones." Reluctance to agree on this proficiency may be that the administrators did not fully comprehend the meaning of the item as the majority of the community service programs and courses are offered with the communities' values, traditions and mores as the rationale.

Of the remaining five proficiency items, the administrators indicated strong support for their role within the community and the relationship the community has to the college. The item addressing itself to the need for business and industrial linkage with the colleges found unanimous consensus. This trend had developed in the 1970s and has witnessed steady growth. Supporting the literature, the study group believes this trend will continue and sees the need for appropriate proficiencies responding to it.

To be effective, the administrator's role within the community also requires proficiencies within the other category areas. The administrator must possess personal characteristics (ability to communicate effectively; commitment to the community college philosophy; dedication; and a desire to make the programs successful), planning, and research and evaluation proficiencies. The function of the community college will continue to expand as a community renewal college (Gollattscheck, et al., 1976), and the continuing education community service administrator will be expected to provide leadership. Linkages with business and industry provide substantial opportunities for community colleges. The Division of Continuing Education and Community Service is responsible for programs in this area, and its ability to respond to industrial needs will enhance the college's purpose for occupational training.

The stability and potential growth of the industrial and business community in Massachusetts will be dependent on several factors. Some include a favorable economic environment; a commitment on behalf of the

local and state governments; and available pool of trained manpower and the expectation that ongoing training will be available; and a sufficient supply of natural resources. Community colleges have begun to emerge as the postsecondary institution ideally suited to provide the manpower training.

Throughout the 1980s and 1990s, continuing education divisions must increase their activity in this area. Creative projects, incorporating elements which are mutually beneficial, will be needed. Continuing education administrators will be positioned to provide leadership for the college as they develop cooperative linkages. Expansion in this area may satisfy other concerns of these divisions. Enrollment and financial stability may be positively affected; new population will have been served; and the college's role in economic development will be strengthened. In responding to this need, administrators must plan effectively; allocate adequate resources; assess ongoing needs; coordinate with faculty and other expert; evaluate educational activities; and demonstrate the college's commitment to this need. Successfully implementing these activities should result in increased trust, confidence and cooperation towards similar goals.

Personal characteristics. After the third iteration of the Delphi questionnaire, consensus was reached on 12 of the 13 proficiency items. Among those, the respondents agreed totally (100 percent of the responses were either "agree" or "strongly agree") on 10 of the proficiency statements. Similar to the other category areas, the Delphi procedure helped produce convergence of opinion.

As stated in Chapters II and III, skills that were categorized as personal characteristics received much attention in the literature and among the panel of experts in Round One. Furthermore, these skills were consistently identified by community college personnel (the former presidents of the National Council on Community Services and Continuing Education, and the researchers who were writing on community college futures). Clear agreement then, on these proficiencies, came from all segments of the research. This perhaps is reflective of the community college, that its commitment is in developing the individual through the educational process.

Arguments in favor of a lower score in any of the items were limited. In effect, the group believed the proficiencies critical but that if forced to prioritize human factors, it is not always feasible, especially when many decisions are based on financial exigencies.

The one item that strong disagreement remained was the need to hold an advanced degree in higher education administration. No significant change of opinion occurred during the second and third iteration. Few explanations were given to support respondents' positions and none of those given amplified their reasons. The groups' position on this issue is perhaps partly due to their immediate concerns with budgets and that many may have received their training as inservice versus possessing the skills prior to assuming their positions.

Personal characteristics and qualities will be tested repeatedly throughout the 1980s and 1990s. Each management function, the direction the divisions move, the ability to adapt and respond to change,

reflects upon the personal attributes the administrator brings to and develops within the position. The issues of limited financial resources; the maintenance of adequate enrollments; increased government regulations; cooperation among other postsecondary institutions; responsibilities within the community; staff development; accountability; and the legal implications related to education will confront administrators throughout this period. Each issue will require responses which insure institutional survival. This will best be realized by the administrator who possesses these proficiencies and apply them properly, combining personal attributes with proficiencies within the other six categories. Through the appropriate application of skills within and among the categories, continuing education community service administrators can assume a leadership role within the institution, and insure the divisions' courses, programs, and services are responsive to community needs. Perhaps the importance of these attributes is noted in the Carnegie Council's (1980) and Argyris' and Cyert's (1980) reports where each fear the pressures on administrators will become so difficult that many will choose to leave.

In summary of Round Three, consensus of opinion was reached on 88 percent of the proficiency items. Disagreement remained on eight items (12 percent). With respect to the effect the Delphi technique had in shaping judgements, convergence of opinion was achieved during the third round on five additional items. Consequently, the technique succeeded in shaping judgements and achieving consensus. The consensus rate for Round Three is found in Table 3.

TABLE 3

ROUND THREE: SUMMARY OF RESPONSES

PROFICIENCIES	Rating Scale	Consensus Rate in Percent	Comments
<u>Financial</u>			
1. Ability to operate on profit-making basis	SD -1 D -2 N -3 A -4 SA -5	-- -- -- 21 79	
2. Ability to insure fiscal management of division budgets	SD -1 D -2 N -3 A -4 SA -5	-- -- -- 32 68	
3. Ability to obtain funds for specialized programs	SD -1 D -2 N -3 A -4 SA -5	-- -- -- 58 42	
4. Ability to obtain funds from local governments	SD -1 D -2 N -3 A -4 SA -5	-- 16 26 47 11	"generally not available" "an all college function. Time required could be better spent elsewhere"
5. Ability to obtain funds through state legislature	SD -1 D -2 N -3 A -4 SA -5	-- 11 42 37 10	"Division of Continuing Education in Massachusetts should remain entrepreneurial" "an all college function. Time required could be better spent elsewhere"

TABLE 3--Continued

PROFICIENCIES		Rating Scale	Consensus Rate in Percent	Comments
6. Ability to write proposals	SD	-1	--	"Proposal writing does not lead to long-term growth"
	D	-2	--	
	N	-3	5	
	A	-4	58	
	SA	-5	37	
7. Ability to allocate funds for maximum benefit	SD	-1	--	
	D	-2	--	
	N	-3	--	
	A	-4	32	
	SA	-5	68	
<u>Planning</u>				
8. Ability to recognize trends in occupational areas	SD	-1	--	
	D	-2	--	
	N	-3	--	
	A	-4	32	
	SA	-5	68	
9. Ability to design programs for publics previously excluded	SD	-1	--	
	D	-2	--	
	N	-3	5	
	A	-4	58	
	SA	-5	37	
10. Ability to exhibit flexibility in planning programs	SD	-1	--	"Too much flexibility leads to chaos" "Flexibility should be tempered by priorities"
	D	-2	--	
	N	-3	--	
	A	-4	11	
	SA	-5	89	

TABLE 3--Continued

PROFICIENCIES		Rating Scale	Consensus Rate in Percent	Comments
11. Ability to develop networks with community agencies to provide needed services to constituency groups	SD	-1	--	"Independence is sometimes very important" "Don't like term 'constituency groups'" "Very time-consuming for amount of business generated"
	D	-2	--	
	N	-3	16	
	A	-4	42	
	SA	-5	52	
12. Ability to develop programs versus "one-shot deals"	SD	-1	--	"Some of our most successful programs are one shot"
	D	-2	16	
	N	-3	16	
	A	-4	52	
	SA	-5	16	
13. Ability to develop appropriate contingency plans	SD	-1	--	"CE requires 'seat-of-the-pants' thinking; no way around it" "With good planning, contingency plans don't need much attention"
	D	-2	--	
	N	-3	16	
	A	-4	32	
	SA	-5	52	
14. Ability to develop and systematically review annual plans	SD	-1	--	
	D	-2	--	
	N	-3	--	
	A	-4	53	
	SA	-5	47	
15. Ability to organize the division which maximizes staff resources	SD	-1	--	
	D	-2	--	
	N	-3	5	
	A	-4	21	
	SA	-5	74	

TABLE 3--Continued

PROFICIENCIES		Rating Scale	Consensus Rate in Percent	Comments
16.	Ability to prioritize activities of division	SD -1 D -2 N -3 A -4 SA -5	-- -- 5 21 74	"N/A"
17.	Ability to use a variety of data in decision-making process	SD -1 D -2 N -3 A -4 SA -5	-- 5 -- 53 42	"I am cynical about much of the data we receive. Unfortunately, those who complete surveys aren't always accurate"
18.	A working knowledge of the latest technologies and its application to management functions	SD -1 D -2 N -3 A -4 SA -5	-- 5 5 58 32	"This college has very little of the latest technologies, and we manage" "One recognized the trends, then finds the experts"
19.	Ability to use modern marketing methods applicable to community colleges	SD -1 D -2 N -3 A -4 SA -5	-- 5 -- 32 63	
20.	Knowledge of public relations and advertising techniques	SD -1 D -2 N -3 A -4 SA -5	-- -- 5 42 53	

TABLE 3--Continued

PROFICIENCIES	Rating Scale		Consensus Rate in Percent	Comments
	SD	D		
21. Ability to supervise people and programs	-1	--	--	
	-2	--	--	
	-3	--	--	
	-4	37		
	-5	63		
22. Knowledge of higher education laws and their impacts for decision making	-1	--	--	
	-2	5		
	-3	32		
	-4	47		
	-5	16		
<u>Research/Evaluation</u>				
23. Ability to conduct community needs assessments	-1	--	--	"Usually already available from other sources--manpower, employment services, etc. Need to tap what's there" "Should be done in another division of college" "These are being done constantly. Better to know what to do with data than to spend time doing them"
	-2	5		
	-3	11		
	-4	63		
	-5	21		
24. Ability to analyze information generated from formal assessments	-1	--	--	"CE doesn't always allow formal assessment. An indepth working knowledge of your constituency is more important" "These are being done constantly. Better to know what to do with data than spend time doing them"
	-2	--	--	
	-3	5		
	-4	68		
	-5	27		

TABLE 3--Continued

PROFICIENCIES		Rating Scale	Consensus Rate in Percent	Comments
25. Ability to analyze information generated from informal structures	SD	-1	--	
	D	-2	--	
	N	-3	--	
	A	-4	63	
	SA	-5	37	
26. Ability to evaluate programs/ courses using sound techniques	SD	-1	--	
	D	-2	--	
	N	-3	--	
	A	-4	58	
	SA	-5	42	
27. Knowledge of community impact studies and implications for the college	SD	-1	--	
	D	-2	--	
	N	-3	11	
	A	-4	63	
	SA	-5	26	
28. Ability to modify programs to apply to local needs and ongoing changes	SD	-1	--	"Within the resources of the campus"
	D	-2	--	
	N	-3	--	
	A	-4	42	
	SA	-5	58	
29. Ability to demonstrate account- ability for division's activities	SD	-1	--	
	D	-2	--	
	N	-3	--	
	A	-4	37	
	SA	-5	63	

TABLE 3--Continued

PROFICIENCIES		Rating Scale	Consensus Rate in Percent	Comments
30. Ability to bring continuing education students into the evaluation process	SD	-1	--	"Hate to admit it but students are not good evaluators (at least as final judgements)"
	D	-2	--	
	N	-3	11	
	A	-4	42	
	SA	-5	47	
<u>Organizational Interaction</u>				
31. Ability to work cooperatively and professionally with the entire college faculty/staff in decision-making process	SD	-1	--	"Important, but final decision-making rests with CE administration and staff. Good to solicit input prior to decision-making"
	D	-2	--	
	N	-3	11	
	A	-4	32	
	SA	-5	57	
32. Ability to coordinate programs with appropriate college personnel	SD	-1	--	
	D	-2	--	
	N	-3	5	
	A	-4	37	
	SA	-5	58	
33. Ability to articulate the continuing education/community service role within the institution	SD	-1	--	
	D	-2	--	
	N	-3	--	
	A	-4	37	
	SA	-5	63	
34. Ability to specifically access the Presidential decision-making process when appropriate	SD	-1	--	"Might not be important to institution organization structure" "Agree when appropriate"
	D	-2	--	
	N	-3	--	
	A	-4	21	
	SA	-5	79	

TABLE 3--Continued

PROFICIENCIES		Rating Scale	Consensus Rate in Percent	Comments
35.	A knowledge of and the appropriate use of college resources	SD -1 D -2 N -3 A -4 SA -5	-- -- -- 53 47	
36.	Ability to develop networks with other continuing education/community service administrators	SD -1 D -2 N -3 A -4 SA -5	-- -- 11 68 21	"I feel strongest about this one, being chairman of DCE/CS deans in Massachusetts" "Important, but CE chief administrator is judged on his/her ability to serve own geographic area"
37.	Ability to work effectively with college trustees when appropriate	SD -1 D -2 N -3 A -4 SA -5	-- -- 5 58 37	"#34 much more important"
38.	Ability to build teams across the organizational lines of the college	SD -1 D -2 N -3 A -4 SA -5	-- -- 6 47 48	"At no expense to the Commonwealth inhibits this"
39.	Ability to identify meaningful roles for the faculty within continuing education/community services	SD -1 D -2 N -3 A -4 SA -5	-- -- 32 47 21	

TABLE 3--Continued

PROFICIENCIES		Rating Scale	Consensus Rate in Percent	Comments
40.	Ability to elicit support for continuing education/community service activities from all academic units	SD -1 D -2 N -3 A -4 SA -5	-- -- 11 36 53	"Should also utilize college P.R. person for this"
Staff Development				
41.	Ability to recruit, employ and retain a talented full- and part-time non-instructional staff	SD -1 D -2 N -3 A -4 SA -5	-- -- -- 21 79	
42.	Ability to recruit, employ and retain talented faculty members	SD -1 D -2 N -3 A -4 SA -5	-- -- -- 21 79	
43.	Knowledge of a variety of instructional methods and appropriate applications for each	SD -1 D -2 N -3 A -4 SA -5	-- -- 5 63 32	"New technologies--computer, T.V., videodisc--are essential tools for the late 1980s" "Better to tap Division chairs and academic deans"
44.	Ability to develop the talents of all faculty and staff members	SD -1 D -2 N -3 A -4 SA -5	-- 5 16 47 32	"Lack of physical resource inhibits this" "Important to hire the most talented to begin with" "N/A" "Often important in developing effective administrative team work and support--also in quality of programs"

TABLE 3--Continued

PROFICIENCIES		Rating Scale	Consensus Rate in Percent	Comments
45. The ability to maintain harmony among the staff	SD	-1	--	"Harmony and what"
	D	-2	--	
	N	-3	5	
	A	-4	47	
	SA	-5	48	
46. Ability to teach effectively	SD	-1	--	"Reinterpreted question-teach=train"
	D	-2	--	
	N	-3	26	
	A	-4	26	
	SA	-5	48	
<u>Community Role</u>				
47. Ability to work effectively with all community groups	SD	-1	--	"Very essential" "You can't work with all" "Impossible to achieve"
	D	-2	--	
	N	-3	11	
	A	-4	68	
	SA	-5	21	
48. Ability to articulate the continuing education/community service role within the community	SD	-1	--	"Important but not overwhelmingly"
	D	-2	--	
	N	-3	5	
	A	-4	37	
	SA	-5	58	
49. Ability to develop collaborative relationships with public and private organizations	SD	-1	--	
	D	-2	--	
	N	-3	--	
	A	-4	26	
	SA	-5	74	

TABLE 3--Continued

PROFICIENCIES		Rating Scale	Consensus Rate in Percent	Comments
50. Ability to develop collaborative relationships with public and private organizations	SD	-1	--	"I feel stronger now because of two grants I received"
	D	-2	--	
	N	-3	35	
	A	-4	37	
	SA	-5	58	
51. Ability to develop collaborative relationships with area educators, governmental and community agencies	SD	-1	--	"Time versus yield is low"
	D	-2	5	
	N	-3	5	
	A	-4	42	
	SA	-5	48	
52. Understanding of sociology and the implication for continuing education/community services on local mores and values	SD	-1	--	"Very essential" "Economic issues override sociological ones"
	D	-2	11	
	N	-3	42	
	A	-4	32	
	SA	-5	15	
Personal Characteristics				
53. A genuine sense of humanness and concern with the ability to responsibly project it	SD	-1	--	"Self-supporting nature of programs often forces the prioritization of other personal characteristics above a 'human service' sense"
	D	-2	--	
	N	-3	11	
	A	-4	42	
	SA	-5	47	
54. An understanding of and commitment to the comprehensive community college philosophy	SD	-1	--	
	D	-2	--	
	N	-3	5	
	A	-4	32	
	SA	-5	63	

TABLE 3--Continued

PROFICIENCIES		Rating Scale	Consensus Rate in Percent	Comments
55. Ability to communicate clearly		SD -1 D -2 N -3 A -4 SA -5	-- -- -- 26 74	
56. A desire to make the continuing education/community service function/program of the college successful		SD -1 D -2 N -3 A -4 SA -5	-- -- -- 16 84	"Would include desire to make total college go!"
57. Dedication to the needs of the community and to the college's ability to provide services		SD -1 D -2 N -3 A -4 SA -5	-- -- -- 32 68	
58. The ability to delegate authority clearly		SD -1 D -2 N -3 A -4 SA -5	-- -- -- 21 79	
59. Ability to be firm, fair and objective		SD -1 D -2 N -3 A -4 SA -5	-- -- -- 32 68	

TABLE 3--Continued

PROFICIENCIES		Rating Scale	Consensus Rate in Percent	Comments
60. Ability to recognize limitations of one's role within the college	SD	-1	--	
	D	-2	--	
	N	-3	--	
	A	-4	53	
	SA	-5	47	
61. Ability to inspire confidence and merit respect	SD	-1	--	
	D	-2	--	
	N	-3	--	
	A	-4	37	
	SA	-5	63	
62. Ability to provide leadership within the college	SD	-1	--	
	D	-2	--	
	N	-3	--	
	A	-4	42	
	SA	-5	58	
63. Ability to accept personal accountability and responsibility for continuing education/community service activities	SD	-1	--	
	D	-2	--	
	N	-3	--	
	A	-4	42	
	SA	-5	58	
64. Ability to accept responsibility for all delegated assignments	SD	-1	--	
	D	-2	--	
	N	-3	--	
	A	-4	47	
	SA	-5	53	

TABLE 3--Continued

PROFICIENCIES	Rating		Consensus Rate in Percent	Comments
	Scale			
65. Possess advanced degree in higher education administration	SD	-1	5	
	D	-2	37	
	N	-3	21	
	A	-4	16	
	SA	-5	21	

Further analysis indicates that the nature of the problems facing community college continuing education community service administrators are complex--that no single category of proficiency items will be sufficient to respond to problems but that the administrators will need to meld proficiencies from each of the seven categories to be effective in decision making, and, ultimately, the successful administration of these divisions.

In addition to the analysis of the degree of consensus achieved in the three rounds of the Delphi process, observations were made of the responses among the two groups, the panel of experts and the deans and assistant deans. This observation was done primarily to determine if differences of opinion could be found among a select group (the panel of experts) and the study group. The research conducted and discussed in Chapter II was inconclusive with respect to this. Brown and Helmer found improvement in responses from select groups, while Campbell and Dalkey, in separate studies, found no evidence to support this. With respect to this study, no differences were found among the two groups. Proficiency items were supported as essential to the continuing education community services administrator during the 1980s and 1990s.

Unsolicited general comments were received from several of the respondents. While it is presumed that each was done in isolation of the others, each addressed the same topic. The respondents were "glad" and "encouraged" that so many colleagues were aware of the proficiencies needed, that they shared similar opinions, and that each of the items are important to the successful management of the divisions.

CHAPTER V

SUMMARY, CONCLUSIONS, IMPLICATIONS AND RECOMMENDATIONS

The Delphi technique was used in this study to determine administrative proficiencies required for continuing education and community services deans and assistant deans in Massachusetts Community Colleges. There was reason to believe, after a review of the literature on the future of postsecondary education, that new skills, appropriately applied, would enhance the management of these institutions.

Summary

Purpose. The purpose of this study was to identify proficiencies appropriate to postsecondary administration during the 1980s and 1990s and to gain consensus of these proficiencies among the deans and assistant deans of continuing education and community services in Massachusetts Community Colleges.

Methodology. The conventional Delphi theory and technique were utilized in this study. Three iterations of the Delphi questionnaire were conducted during October, 1981, and June, 1982. Two respondent groups participated in the study. The initial group, the panel of experts, identified those proficiencies perceived as necessary (Round One of the survey). The study group, the deans and assistant deans, rated each proficiency item using a five-point scale indicating agreement or disagreement with a neutral response (Round Two). Data received from

Round Two were compiled and provided to the respondents in Round Three. In this final round, respondents were asked to reevaluate their previous response based on median, and interquartile range scores. Results of Round Three were the basis for analysis.

Data analysis. Data were collected over three iterations of the Delphi procedure. Analysis was based on the degree of consensus achieved for each proficiency item. Prior to the study, a decision had been made that 75 percent of the responses were to the left or right of neutral constituted consensus. Statistical feedback in the form of median and interquartile range scores was provided. Observations were conducted for the responses by the two respondent groups based on research conducted by Brown and Helmer; Campbell; and Dalkey. The high response rates (61 percent for Round One and 66 percent for Rounds Two and Three) indicate reliability in the data.

Results. Results of the study were presented for each round of the Delphi procedure. As expected and desired, Round One witnessed a broad range of proficiency statements. Seventy-seven were originally listed and later reduced to 65 for Delphi Questionnaire #2 and #3. Data received supported several assumptions of the study and the major literature reviewed on management skills for the 1980s and 1990s.

Round Two results were based on consensus for each item. Unexpected was the high rate (80 percent) where consensus was achieved for the 65 items. The data obtained from Round Two were compiled and presented to the respondents in Round Three with directions to

reevaluate original responses and if the new answer was outside of the interquartile range, the rationale was to be given.

Round Three. Round Three results were presented in seven category areas. Consensus was achieved in 88 percent of the proficiency items, clearly demonstrating agreement for the listed proficiencies. A lack of feedback from the respondents limited analysis for those items where consensus was not reached.

Finance. Consensus was achieved on five of the seven proficiency statements. Based on the divisions' funding structure, there was reluctance in support for proficiencies in obtaining state and/or local funds. Strong agreement was found in the other items supporting the need to be proficient in handling financial concerns. This agreement supports the literature addressing this area.

The 1980s and 1990s will see increased pressures to obtain adequate financial support. Competition will increase and, at the same time, support from governments will decrease. This not only will require more efficient management with the resources available, but will impact on instructional programs requiring administrators to prioritize programs and services which are necessary and to discontinue those which are not.

Financial stability is and will continue to be a function of enrollments. Therefore, as competition among postsecondary institutions, the employment sector, and the armed services for potential students increases, the need to maintain enrollments as a direct influence

on adequate financial resources will require administrators to direct efforts towards this. Administrators who neglect to prioritize this activity appropriately and allocate sufficient resources will endanger the division's ability to respond to student and community needs.

Research and evaluation. Complete agreement was achieved on all eight proficiency statements. This was consistent for Rounds Two and Three. Comments received suggesting college-wide activities implied support for items listed in the organizational interaction category.

The function of research and evaluation interrelates to each of the other proficiency categories. Skills in this area, used in concert with other skill items, completes the planning process. Quality, accountability, programs responding to market or community needs, and maintaining adequate enrollments are issues which will confront community college continuing education community service administrators throughout the 1980s and 1990s. Administrators, therefore, must possess skills in this area to identify trends, evaluate alternate strategies, and develop responses to these problems.

Quality and accountability can be maintained and should be the focus of the total program for each division. To achieve this, administrators must implement an effective evaluation system, collect information, and use it in the planning process. The ability to deal with people and communicate effectively are important related skills. In addition, community college continuing education and community service administrators are oftentimes responsible for conducting ongoing

assessments of their communities. Consequently, research and evaluation skills will be required along with the ability to understand the application of technology in data collection and analysis.

Because enrollments directly influence the survival of these divisions, administrators must examine every option to maintain enrollments. Recruitment, and developing courses and/or programs as a planning function, will not adequately address the problem. Continuing education community service administrators must conduct ongoing evaluations and use available data in developing strategies to increase retention rates. Administrators who bring into this process the application of technology to forecast the high risk, or potential dropout student, are more likely to be successful in their efforts.

Organizational interaction. Consensus was achieved on 90 percent of the (ten) proficiency items. Of significance, the respondents did not agree that developing meaningful faculty roles within the divisions was an important proficiency. This disagreement is divergent from both the literature and data received from the panel of experts.

The ability to work cooperatively among the institution's divisions is significantly important for the survival of community colleges. The issues confronting these organizations throughout the 1980s and 1990s are institutional and "team-work" will be key to successful responses. Managers must not view themselves above the problems but must find approaches to bring together those segments within the institution which can contribute positively to institutional responses.

In addition, continuing education and community service administrators must blend personal attributes with proficiencies listed in this category to maximize their leadership effectiveness, increase confidence and trust among peers and colleagues, and find meaningful roles for faculty within the division.

Staff development. Disagreement remained on the need for effective teaching proficiencies. One justification for this belief is that these administrators may see little relationship between the ability to teach effectively with the ability to manage effectively. Another reason may be financial concerns override teaching concerns.

The development of staff must become an institutional commitment with the divisions of continuing education and community services assuming their responsibility towards this goal. The pace of change along with demands in emerging occupational areas requires the divisions to maintain quality teaching and administrative staffs. Staff development must be incorporated in the division's ongoing planning process insuring that adequate financial resources are allocated. Ongoing evaluation, ensuring quality and appropriateness, must be incorporated into the activities. Furthermore, the division's administrators must comprehend their leadership responsibilities for developing and/or improving faculty in relation to the learning needs of adults and to alternative instructional formats.

Staff development must include senior-level administrators. Proficiencies identified in this study, along with their application to

future trends in community college administration, substantiate the need for an institutional commitment.

Community roles. Six proficiency items were listed; consensus was achieved on five. Respondents did not believe sociological implications were necessary for effective program administration. Surprising though, most community service courses and programs are representative of the sociological make-up of the communities served by each college. Reluctance to agree may indicate confusion on the item. Strong support was found among the remaining items, especially the need to effectively develop business/industry college linkages. This supports the recognized trends in this area.

Strategies developed satisfying the continuing education and community services manager's role within the community must recognize the economic impacts the college has on the communities served by it. The colleges will be best served by continuing education community service administrators who can create a climate where community leaders acknowledge the college as a viable training facility which can be relied upon as communities seek to attract new industries. This cooperative effort requires administrators who can work effectively with community groups, industrial and business leaders and government agencies.

Personal characteristics. Consensus was arrived at for 12 of the 13 (92 percent) of the proficiency items. Of those, respondents agreed totally (100 percent of the responses were either "agree" or "strongly

agree") on ten items. This level of agreement for these items suggests the respondents believe that it is equally important to possess the skills and apply them recognizing human along with professional concerns.

The effective administrator must possess those personal attributes which add a needed dimension to each decision-making situation. Community colleges can expect changes, and each college administrator will be expected to provide leadership through this period. Administrators can expect difficult times with little or no recognition for their contributions. Institutional commitment, personal and professional dedication, and confidence will be continuously required. This may decrease frustrations and the desire to seek alternative careers.

Summary of results. Consensus was achieved on 88 percent of the proficiency statements with strong support evidenced in all seven categories. Respondents, indicated by their ratings for each item, supported both the literature pertinent to the topic and the data generated in Round One of the survey.

Results indicate an awareness of the trends in postsecondary education applicable to community college continuing education and community services divisions and the proficiencies which will provide abilities to respond to these trends. Analysis further illustrates the need to combine proficiencies in response to the issues confronting community colleges throughout the 1980s and 1990s.

Conclusions

Based on the data reviewed in this study, conclusions were reached with respect to the application of the Delphi technique to this study, the degrees to which consensus was achieved, and concerns which remain.

The Delphi technique.

1. The Delphi technique was effective in identifying proficiency items among the panel of experts. The results it generated were useful in producing the final instrument, or Delphi Questionnaires #2 and #3.

2. The conventional Delphi technique, using two separate respondent groups, was effective for the design of this study. It allowed opinions from "experts" not associated with Massachusetts Community Colleges.

3. The Delphi technique proved effective in shaping judgements and for achieving consensus among anonymous respondents without face-to-face encounters.

4. The return rates of the questionnaires (61 percent for Round One and 66 percent for Rounds Two and Three) indicate the data produced by the Delphi procedure are reliable.

5. The Delphi technique did not adequately encourage feedback from participants who remained outside of the interquartile range as they had been directed to provide.

Achievement of consensus.

1. That a high degree of consensus was achieved in both Rounds Two (80 percent) and Three (88 percent) indicating the respondents appear aware of or are knowledgeable of the proficiencies which will be fundamental to effective administration in the 1980s and 1990s.

2. That for most items in the seven proficiency categories, consensus was achieved demonstrating consistency with the pertinent literature and the panel of experts.

3. That topics minimally impacting on current administrative decisions in continuing education and community services (such as: legal concerns, teaching effectively, and state funding formulas) were viewed with reluctance regarding the need to be proficient in these areas.

4. That personal characteristics were consistently rated high indicating it is equally as important how one manages people and programs versus which skills one engages to administer his/her areas of responsibility.

5. That the term "proficiency"--skills along with the capability to utilize these skills in a specific situation--is an applicable term for the purposes of this study.

6. That several of the assumptions outlined in Chapter I were supported by the data gathered from each iteration of the Delphi procedure. Support was also evidenced in the related literature reviewed.

The assumptions supported include:

- a. Accountability of programs and courses will dominate as students become more consumer conscious;

- b. Learning theory will play an increasingly important role in program administration;
- c. Competition will increase making it necessary to cooperate with other institutions and agencies;
- d. Technologies will increasingly impact on management and instruction;
- e. Specialized programs for target populations will increase.

Concerns. Based on the ratings in the financial category, the written comments on the instruments and the historical nature of the funding of continuing education and community service programs, the respondents remain concerned over the funding for these divisions. While disagreement remains on those proficiencies which would respond to a different funding formula, the participants appear to view the current funding design as permanent. If this were accurate for the courses which award college credit, it would be inconsistent with the trend found in other community college systems.

Implications

Continuing education and community service divisions in Massachusetts Community Colleges have recently attained parity with other divisions within the colleges. Cotoia (1976) cited several divisions within the system which went beyond equality and provided both academic and institutional leadership. Harrington (1977), Watson (1980), and Schmid and Russell (1980) see community colleges experiencing growth throughout the 1980s and 1990s and that lifelong learning will dominate

(Kavanaugh, 1979). Adults (Harrington, 1977; Schmid and Russell, 1980), minorities (Carnegie Council, 1980), and traditionally underserved groups will increase participation rates in community college activities. Shandler (1980) sees continuing education divisions ideally situated to respond to these new demands as institutional opportunities.

The implications to these trends based on the results of this study include:

1. If continuing education community services is to respond to societal demands in a rapidly changing environment, a mechanism must be found to insure adequate, trained management of the divisions.

2. Due to the acceleration of change and the flexibility these division managers seek, periodic review of proficiencies should be conducted to insure the divisions' viability.

3. Because this study demonstrated agreement among all data collected relating to the future, postsecondary educational institutions must develop ongoing strategies focusing on the future, thereby limiting unforeseen conditions.

4. The study provides a beginning point for job/task analysis for each position at each institution.

5. The results of this study provide a good beginning point for staff development and that the results provide agenda for inservice workshops.

6. The results of this study provide a good beginning point for job descriptions and hiring procedures for deans and assistant deans of

continuing education and community services.

7. The taxonomy of proficiencies could be replicated for other systems. The original list of proficiencies was generated from individuals not associated with Massachusetts Community Colleges. Based on Martino's findings, the data from that group would not differ significantly from another equally expert group. Therefore, it is applicable to other systems.

Future Research

Based on the findings of this study, several studies should be initiated immediately. These include:

1. An assessment of current proficiency levels among the study group should be conducted to determine the discrepancy between what this group views as essential and which of those proficiencies each possesses.

2. A study should be conducted to determine if there are significant differences of opinion of the need for the listed proficiencies among deans and the assistant deans.

3. A study should be conducted to determine if and what training opportunities are available in Massachusetts addressing the proficiencies identified in this study.

4. A study should be conducted among lower-level (directors, coordinators, and program administrators) continuing education and community service staff to determine which proficiencies they are lacking. This could provide direction to career growth opportunities.

5. A study should be conducted to determine if significant differences exist among those who have held their positions for five years or more and of those with less than this length of employment. While it was not part of the analysis of this study, it was observed that those who had been employed within the same position for more than five years consistently agreed with the need for each proficiency. Therefore, further inquiry is warranted.

6. A study should be conducted to prioritize the proficiencies currently used and to establish a mechanism for prioritizing and set time lines for proficiencies required in the future.

7. A replication of this study will be ongoing and therefore should be conducted every four to six years. When the study is replicated, the study group should be expanded to gain perceptions of the colleges' presidents and/or the appointing authority.

8. A study should be conducted in other community college systems or within regions to determine if commonality of perceptions exist with the eventual goal of establishing minimum standards for continuing education community services senior-level administrators.

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APPENDICES

APPENDIX A



October 1, 1981

Dear

I am in the process of conducting a Delphi study for my doctoral program at the University of Massachusetts. One purpose of this study is to identify proficiencies that Massachusetts community college community service/continuing education administrators will need during the 1980s and 1990s. Part of the study is to develop a questionnaire (or Round One of the study) based upon input received from community college and/or continuing education professionals.

I would appreciate your assistance with this study. Please list as many of those proficiencies which you believe are essential for community college community service/continuing education administrators to possess or develop for the 1980s and 1990s. I have attached a sheet for your use and have included an example of a proficiency.

Enclosed is a self-addressed, stamped envelope. I would greatly appreciate it if you would return your list by October 16. All information received will be kept confidential. If you would like to receive the results of this study, please indicate that on the attached sheet.

Thank you for your cooperation and assistance.

Sincerely,

Steve Maradian
Continuing Education
and Community Services

PROFICIENCIES FOR COMMUNITY SERVICE/CONTINUING EDUCATION
ADMINISTRATORS DURING THE 1980s AND 1990s

Example: The ability to attract, retain and develop talented staff members.

1. _____

2. _____

3. _____

4. _____

5. _____

6. _____

7. _____

8. _____

9. _____

10. _____

SUBMITTED BY: _____

ADDRESS: _____



Please check (✓) if you would like to receive the results of the study.

Please return in the enclosed self-addressed, stamped envelope to:
Steve Maradian, PHCC
Martinsville, Virginia 24115

APPENDIX B



June 30, 1982

Dear

I would like to request your assistance in conducting a Delphi study of Continuing Education and Community Service in Massachusetts Community Colleges. This study is intended to give further definition to the administrative proficiencies required for the 1980s and 1990s. The study is under the direction of Dr. Peter Wagschal at the University of Massachusetts and was begun while I was employed at North Shore Community College.

The study involves the use of the Delphi technique, a method to gain consensus on administrative proficiencies among continuing education and community service deans and assistant deans. Three iterations of the questionnaire are planned. While the instrument may appear lengthy, the completion of it should take approximately ten to fifteen minutes. Because of the direct application of this study to your area of responsibility, I hope that you participate in the study.

There will be three rounds of the Delphi process. Round One has been completed. Hopefully, you will participate in the remaining rounds by completing Questionnaires #2 and 3. Questionnaire #2 is enclosed with this letter. Instructions precede the proficiency statements. Please complete the questionnaire and return within five days. Upon receipt of the questionnaires, I will compile the data and begin the final round with the information generated from the attached instrument.

Your support of this study is greatly appreciated.

Sincerely,

Steve Maradian
Continuing Education
and Community Services

SM:sc

DELPHI QUESTIONNAIRE #2

PART I--INSTRUCTIONS

A. In the space provided, please give your name, title, and identify your community college. (Your responses will be treated confidentially and be revealed in group data only.) The purpose of requesting this information is to provide feedback on subsequent rounds of both group and your response.

B. Proficiencies are used in the study to help give direction to the administration of Continuing Education and Community Service. Using the key to the right, circle the number that best represents your opinion on the need for the proficiencies listed in Part II. Proficiencies are defined as skills and the correct application of those skills.

C. In responding, do not think of proficiencies which will be acquired but rather in terms of what will be needed to satisfactorily administer the division during the 1980s and 1990s.

D. To maintain a reasonable time between each of the three rounds, please complete and return the questionnaire in the stamped, self-addressed envelope within five (5) days.

LAST NAME First Middle Initial

Title

College

KEY:

1 = Strongly Disagree

2 = Disagree

3 = Neutral

4 = Agree

5 = Strongly Agree

DELPHI QUESTIONNAIRE #2
(PART II)

Proficiencies	Key					Comments
	SD	D	N	A	SA	
<u>Financial</u>						
1. Ability to operate on profit-making basis	1	2	3	4	5	
2. Ability to insure fiscal management of division budgets	1	2	3	4	5	
3. Ability to obtain funds for specialized programs	1	2	3	4	5	
4. Ability to obtain funds from local governments	1	2	3	4	5	
5. Ability to obtain funds through state legislature	1	2	3	4	5	
6. Ability to write proposals	1	2	3	4	5	
7. Ability to allocate funds for maximum benefit	1	2	3	4	5	
<u>Planning</u>						
8. Ability to recognize trends in occupational areas	1	2	3	4	5	
9. Ability to design programs for publics previously excluded	1	2	3	4	5	
10. Ability to exhibit flexibility in planning programs	1	2	3	4	5	
11. Ability to develop networks with community agencies to provide needed services to constituency groups	1	2	3	4	5	

DELPHI QUESTIONNAIRE #2: PART II--Continued

Proficiencies	Key					Comments
	SD	D	N	A	SA	
12. Ability to develop programs versus "one-shot deals"	1	2	3	4	5	
13. Ability to develop appropriate contingency plans	1	2	3	4	5	
14. Ability to develop and systematically review annual plans	1	2	3	4	5	
15. Ability to organize the division which maximizes staff resources	1	2	3	4	5	
16. Ability to prioritize activities of division	1	2	3	4	5	
17. Ability to use a variety of data in decision-making process	1	2	3	4	5	
18. A working knowledge of the latest technologies and its application to management functions	1	2	3	4	5	
19. Ability to use modern marketing methods applicable to community colleges	1	2	3	4	5	
20. Knowledge of public relations and advertising techniques	1	2	3	4	5	
21. Ability to supervise people and programs	1	2	3	4	5	
22. Knowledge of higher education laws and their impacts for decision making	1	2	3	4	5	
<u>Research/Evaluation</u>						
23. Ability to conduct community needs assessments	1	2	3	4	5	

DELPHI QUESTIONNAIRE #2: PART II--Continued

Proficiencies	Key					Comments
	SD	D	N	A	SA	
24. Ability to analyze information generated from formal assessments	1	2	3	4	5	
25. Ability to analyze information generated from informal structures	1	2	3	4	5	
26. Ability to evaluate programs/courses using sound techniques	1	2	3	4	5	
27. Knowledge of community impact studies and implications for the college	1	2	3	4	5	
28. Ability to modify programs to apply to local needs and ongoing changes	1	2	3	4	5	
29. Ability to demonstrate accountability for division's activities	1	2	3	4	5	
30. Ability to bring continuing education students into the evaluation process	1	2	3	4	5	
<u>Organizational Interaction</u>						
31. Ability to work cooperatively and professionally with the entire college faculty/staff in decision-making process	1	2	3	4	5	
32. Ability to coordinate programs with appropriate college personnel	1	2	3	4	5	
33. Ability to articulate the continuing education/community service role within the institution	1	2	3	4	5	
34. Ability to specifically access the Presidential decision-making process when appropriate	1	2	3	4	5	

DELPHI QUESTIONNAIRE #2: PART II--Continued

Proficiencies	Key					Comments
	SD	D	N	A	SA	
35. A knowledge of and the appropriate use of college resources	1	2	3	4	5	
36. Ability to develop networks with other continuing education/community service administrators	1	2	3	4	5	
37. Ability to work effectively with college trustees when appropriate	1	2	3	4	5	
38. Ability to build teams across the organizational lines of the college	1	2	3	4	5	
39. Ability to identify meaningful roles for the faculty within continuing education/community services	1	2	3	4	5	
40. Ability to elicit support for continuing education/community service activities from all academic units	1	2	3	4	5	
<u>Staff Development</u>						
41. Ability to recruit, employ and retain a talented full- and part-time non-instructional staff	1	2	3	4	5	
42. Ability to recruit, employ and retain talented faculty members	1	2	3	4	5	
43. Knowledge of a variety of instructional methods and appropriate applications for each	1	2	3	4	5	
44. Ability to develop the talents of all faculty and staff members	1	2	3	4	5	

DELPHI QUESTIONNAIRE #2: PART II--Continued

Proficiencies	Key					Comments
	SD	D	N	A	SA	
45. The ability to maintain harmony among the staff	1	2	3	4	5	
46. Ability to teach effectively	1	2	3	4	5	
<u>Community Role</u>						
47. Ability to work effectively with all community groups	1	2	3	4	5	
48. Ability to articulate the continuing education/community service role within the community	1	2	3	4	5	
49. Ability to develop collaborative relationships with business and industry	1	2	3	4	5	
50. Ability to develop collaborative relationships with public and private organizations	1	2	3	4	5	
51. Ability to develop collaborative relationships with area educators, governmental and community agencies	1	2	3	4	5	
52. Understanding of sociology and the implication for continuing education/community services on local mores and values	1	2	3	4	5	
<u>Personal Characteristics</u>						
53. A genuine sense of humanness and concern with the ability to responsibly project it	1	2	3	4	5	

DELPHI QUESTIONNAIRE #2: PART II--Continued

Proficiencies	Key					Comments
	SD	D	N	A	SA	
54. An understanding of and commitment to the comprehensive community college philosophy	1	2	3	4	5	
55. Ability to communicate clearly	1	2	3	4	5	
56. A desire to make the continuing education/community service function/program of the college successful	1	2	3	4	5	
57. Dedication to the needs of the community and to the college's ability to provide services	1	2	3	4	5	
58. The ability to delegate authority clearly	1	2	3	4	5	
59. Ability to be firm, fair and objective	1	2	3	4	5	
60. Ability to recognize limitations of one's role within the college	1	2	3	4	5	
61. Ability to inspire confidence and merit respect	1	2	3	4	5	
62. Ability to provide leadership within the college	1	2	3	4	5	
63. Ability to accept personal accountability and responsibility for continuing education/community service activities	1	2	3	4	5	
64. Ability to accept responsibility for all delegated assignments	1	2	3	4	5	
65. Possess advanced degree in higher education administration	1	2	3	4	5	

APPENDIX C



June 15, 1982

Dear

Thank you for your participation in the first round of the Delphi study of administrative proficiencies. Your cooperation has contributed greatly to the study.

Enclosed is the final Delphi questionnaire along with a copy of your original answers to the previous questionnaire. Part I of the instrument includes the directions for completing the survey. You will note that your original answer to each proficiency item is marked in red ink under the column "old answer." Please refer to this as you reconsider your response to each item.

The questionnaire should take approximately ten to fifteen minutes to complete. To maintain a reasonable time period, please complete and return the questionnaire in the stamped, self-addressed envelope within five (5) days.

Your cooperation and interest in this study is greatly appreciated.

Sincerely,

Steve Maradian
Continuing Education
and Community Services

SM:sc
Enclosures

CONTINUING EDUCATION/COMMUNITY SERVICES PROFICIENCIES
FOR MASSACHUSETTS COMMUNITY COLLEGES
FOR THE 1980s AND 1990s

PART I--INSTRUCTIONS

- A. NAME: _____
- B. This is the second of the Delphi questionnaires. The same proficiency statements listed in Delphi Questionnaire #1 are repeated. For your information, the median and the interquartile range (IQR), as determined from the first survey round, are presented. The IQR is the interval containing the middle fifty percent of the responses.
- C. Please reconsider your previous ratings (listed in red ink as the "Old Answer" next to the column headed "Key") and change them if you wish by circling the appropriate number on the "New" scale denoted by "key." Whenever your new rating is outside the IQR for all responses from the first survey round (indicated by the brackets []), briefly state the reason under the column marked "Comments" why you think the rating should remain outside of the majority of the respondents. No reason needs to be given when your rating is inside the IQR. The median response for all respondents from the first survey is marked by the diagonal (/). The rating scale (Key) remains the same; i.e., 1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree.

D. Example:

Proficiency	Key					Old	
	SD	D	N	A	SA	Answer	Comments
Possess advanced degree in higher education administration	1	[2	3	4]	5	Lends credibility to position new answer

- The respondent's previous answer was 5 (old answer) indicating strong agreement with the proficiency. After reconsideration, the respondent again rated the proficiency 5 (by circling the new response). Since the rating remained outside of the IQR (indicated by brackets), the rating was justified by the comment "lends credibility to position." The median response to the proficiency was 3 (indicated by the diagonal). Remember, if your rating is within the IQR, no comment is required.
- E. To maintain a reasonable time between each survey, please complete and return the questionnaire in the self-addressed, stamped envelope within five (5) days. At the completion of the study, I will forward a summary to each participant. Thank you for your assistance.

DELPHI QUESTIONNAIRE #3
(PART II)

Proficiencies	Key					Old	
	SD	D	N	A	SA	Answer	Comments
<u>Financial</u>							
1. Ability to operate on profit-making basis	1	2	3	[4	5]		
2. Ability to insure fiscal management of division budgets	1	2	3	[4	5]		
3. Ability to obtain funds for specialized programs	1	2	3	[4	5]		
4. Ability to obtain funds from local governments	1	2	[3	4]	5		
5. Ability to obtain funds through state legislature	1	2	[3	4]	5		
6. Ability to write proposals	1	2	3	[4	5]		
7. Ability to allocate funds for maximum benefit	1	2	3	[4	5]		
<u>Planning</u>							
8. Ability to recognize trends in occupational areas	1	2	3	[4	5]		
9. Ability to design programs for publics previously excluded	1	2	3	[4	5]		
10. Ability to exhibit flexibility in planning programs	1	2	3	4	[5]		
11. Ability to develop networks with community agencies to provide needed services to constituency groups	1	2	3	[4	5]		

DELPHI QUESTIONNAIRE #3: PART II--Continued

Proficiencies	Key					Old Answer	Comments
	SD	D	N	A	SA		
12. Ability to develop programs versus "one-shot deals"	1	2	[3	4]	5		
13. Ability to develop appropriate contingency plans	1	2	3	[4	5]		
14. Ability to develop and systematically review annual plans	1	2	3	[4	5]		
15. Ability to organize the division which maximizes staff resources	1	2	3	[4	5]		
16. Ability to prioritize activities of division	1	2	3	4	[5]		
17. Ability to use a variety of data in decision-making process	1	2	3	[4	5]		
18. A working knowledge of the latest technologies and its application to management functions	1	2	3	[4	5]		
19. Ability to use modern marketing methods applicable to community colleges	1	2	3	[4	5]		
20. Knowledge of public relations and advertising techniques	1	2	3	[4	5]		
21. Ability to supervise people and programs	1	2	3	[4	5]		
22. Knowledge of higher education laws and their impacts for decision making	1	2	[3	4]	5		
<u>Research/Evaluation</u>							
23. Ability to conduct community needs assessments	1	2	3	[4	5]		

DELPHI QUESTIONNAIRE #3: PART II--Continued

Proficiencies	Key					Old Answer	Comments
	SD	D	N	A	SA		
24. Ability to analyze information generated from formal assessments	1	2	3	[4]	5		
25. Ability to analyze information generated from informal structures	1	2	3	[4]	5]		
26. Ability to evaluate programs/courses using sound techniques	1	2	3	[4]	5]		
27. Knowledge of community impact studies and implications for the college	1	2	3	[4]	5		
28. Ability to modify programs to apply to local needs and ongoing changes	1	2	3	[4]	5]		
29. Ability to demonstrate accountability for division's activities	1	2	3	[4]	5]		
30. Ability to bring continuing education students into the evaluation process	1	2	3	[4]	5]		
<u>Organizational Interaction</u>							
31. Ability to work cooperatively and professionally with the entire college faculty/staff in decision-making process	1	2	3	[4]	5]		
32. Ability to coordinate programs with appropriate college personnel	1	2	3	[4]	5]		
33. Ability to articulate the continuing education/community service role within the institution	1	2	3	[4]	5]		
34. Ability to specifically access the Presidential decision-making process when appropriate	1	2	3	4	[5]		

DELPHI QUESTIONNAIRE #3: PART II--Continued

Proficiencies	Key					Old Answer	Comments
	SD	D	N	A	SA		
35. A knowledge of and the appropriate use of college resources	1	2	3	[4	5]		
36. Ability to develop networks with other continuing education/community service administrators	1	2	3	[4	5]		
37. Ability to work effectively with college trustees when appropriate	1	2	3	[4	5]		
38. Ability to build teams across the organizational lines of the college	1	2	3	[4	5]		
39. Ability to identify meaningful roles for the faculty within continuing education/community services	1	2	[3	4]	5]		
40. Ability to elicit support for continuing education/community service activities from all academic units	1	2	3	[4	5]		
<u>Staff Development</u>							
41. Ability to recruit, employ and retain a talented full- and part-time non-instructional staff	1	2	3	[4	5]		
42. Ability to recruit, employ and retain talented faculty members	1	2	3	[4	5]		
43. Knowledge of a variety of instructional methods and appropriate applications for each	1	2	3	[4	5]		
44. Ability to develop the talents of all faculty and staff members	1	2	3	[4	5]		

DELPHI QUESTIONNAIRE #3: PART II--Continued

Proficiencies	Key				Old Answer	Comments
	SD	D	N	A	SA	
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46. Ability to teach effectively	1	2	[3	4	5]	
<u>Community Role</u>						
47. Ability to work effectively with all community groups	1	2	3	[4	5]	
48. Ability to articulate the continuing education/community service role within the community	1	2	3	[4	5]	
49. Ability to develop collaborative relationships with business and industry	1	2	3	[4	5]	
50. Ability to develop collaborative relationships with public and private organizations	1	2	3	[4	5]	
51. Ability to develop collaborative relationships with area educators, governmental and community agencies	1	2	3	[4	5]	
52. Understanding of sociology and the implication for continuing education/community services on local mores and values	1	2	[3	4	5]	
<u>Personal Characteristics</u>						
53. A genuine sense of humanness and concern with the ability to responsibly project it	1	2	3	[4	5]	

DELPHI QUESTIONNAIRE #3: PART II--Continued

Proficiencies	Key					Old	
	SD	D	N	A	SA	Answer	Comments
54. An understanding of and commitment to the comprehensive community college philosophy	1	2	3	[4	5]		
55. Ability to communicate clearly	1	2	3	[4	5]		
56. A desire to make the continuing education/community service function/program of the college successful	1	2	3	4	[5]		
57. Dedication to the needs of the community and to the college's ability to provide services	1	2	3	[4	5]		
58. The ability to delegate authority clearly	1	2	3	[4	5]		
59. Ability to be firm, fair and objective	1	2	3	[4	5]		
60. Ability to recognize limitations of one's role within the college	1	2	3	[4	5]		
61. Ability to inspire confidence and merit respect	1	2	3	[4	5]		
62. Ability to provide leadership within the college	1	2	3	[4	5]		
63. Ability to accept personal accountability and responsibility for continuing education/community service activities	1	2	3	[4	5]		
64. Ability to accept responsibility for all delegated assignments	1	2	3	[4	5]		
65. Possess advanced degree in higher education administration	1	[2	3	4]	5		

